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(54) Title: OLFACTORY RECEPTOR SEQUENCES

(57) Abstract: The present invention provides polynucleotide sequences which encode polypeptides involved in olfactory sensation. The present invention also provides the polypeptides encoded by these polynucleotide sequences, vectors comprising these polynucleotide sequences and host cells transfected with these polynucleotide sequences. The present invention further provides for functional variants and homologues of these polynucleotide sequences and the polypeptides encoded by these polynucleotides. Libraries of polypeptides are also provided. Also included in the present invention is the use of these polypeptides and libraries of polypeptides in screening odorant molecules to determine the correspondence (scent representation, scent fingerprint or scent profile) between individual odorant receptors (the polypeptides) and particular odorant molecules. Also encompassed by the present invention is the use of the scent representation, scent fingerprint or scent profile to re-create and edit scents.

OLFACTORY RECEPTOR SEQUENCES

CROSS-REFERENCE TO RELATED APPLICATIONS

5 This application claims priority benefit of United States Provisional Patent Application Serial No. 60/158,615, filed on October 8, 1999, and United States Provisional Patent Application Serial No. 60/184,809, filed on February 24, 2000. The contents of those applications are hereby incorporated by reference herein in their entirety.

STATEMENT OF RIGHTS TO INVENTIONS MADE UNDER FEDERALLY SPONSORED RESEARCH

Not applicable.

TECHNICAL FIELD

15 The present invention is in the field of human olfactory receptors and their use in screening for olfactory agonists and antagonists. The present invention pertains to isolated nucleotide sequences which encode human olfactory receptors and also to the proteins
20 encoded by said nucleotide sequences. The present invention also encompasses vectors comprising the nucleotide sequences of the invention and further, host cells transfected with said vectors. The present invention also allows for the determination of primary scents and the identification of the odor receptors which are encoded to detect these primary scents as well as the determination of secondary scents and the identification of
25 combinations of odor receptors which are encoded to detect such secondary scents.

BACKGROUND ART

Our sense of smell plays an important role not only in our appreciation of our surroundings such as the smell of flowers or new mown grass, but also evolved as a survival skill. Numerous odorant molecules can be detected at extremely low concentrations, providing early warning of danger, such as the smell of smoke or contaminated food. Indeed, a potent example of this is that most pregnant women experience a heightened sense of smell, presumably to protect the fetus from the deleterious effects of food poisoning.

It is estimated that humans can detect millions of different molecular species; however, our nose can discriminate only a fraction of these different chemicals (Mombaerts *Curr. Opin. Genet. Dev.* 1999 9, 315-320), usually estimated at about 10,000 odorants (Axel, *Scientific American* 1995, October, 154-159). Odorants for terrestrial species such as humans, are volatile (air born) ligands which are detected by the olfactory system. Odorants have vastly different chemical structures and subtle differences can lead to pronounced changes in the perceived odor (Mombaerts, *supra*). For instance, when the hydroxyl group of octanol is replaced by a carboxyl group to give octanoic acid, its perceived odor changes from orange and rose-like to rancid and sweaty (Malnic *et al.*, *Cell* 1999 96, 713-723). The basis for these feats of sensory perception are just beginning to be understood at a cellular and molecular level.

The olfactory system contains millions of olfactory sensory neurons (OSNs) located in the olfactory epithelium of the nasal cavity. In humans, the olfactory epithelium occupies an area of approximately 5 cm². The OSNs are bipolar with one end extending through the supporting cell into the mucosal layer, terminating in hairlike cilia. These cilia are the site of the olfactory receptors (OR) where the odorant ligands are thought to bind (Mombaerts *Curr. Opin. Genet. Dev.* 1999 9, 315-320, Hildebrand *et al.*, *Annu. Rev. Neurosci.*, 1997, 20, 595-631). The OSNs also have a single unbranched axon which leads to the olfactory bulb, a part of the brain containing approximately 2000 glomeruli where the axons terminate and initial processing of the sensory code takes place. OSNs expressing the same OR are randomly interspersed throughout the olfactory epithelium, but in both the nose and the bulb, information derived from different ORs is strictly segregated; each OSN in the nose and each glomerulus in the olfactory bulb appear to be dedicated to input from one or few OR type(s) (Malnic *et al.*, *Cell* 1999 96, 713-723). It also appears that the location of the glomeruli are conserved across individuals of a species, providing the first spatial processing of particular odorant patterns (Mombaerts *Curr. Opin. Genet. Dev.* 1999 9, 315-320). The domains in the olfactory bulb for

different odors may overlap, but the overall patterns are distinct (Hildebrand *et al.*, *supra*), therefore, it should be possible to identify and reproduce the characteristic pattern of a given odorant. Output neurons project from the olfactory bulb to the primary olfactory cortex and from there to the higher cortical areas of the brain and to the limbic system (Malnic *et al.*,
5 *supra*; Hildebrand *et al.*, *supra*, 20, 595-631).

Until the identification of a large family of genes encoding putative odorant receptors (Buck & Axel *Cell* 1991 65, 175-187), progress towards understanding the process of odor recognition was negligible. In recent years there has been an explosion in this field as more and more putative odor receptors are isolated and cloned. The odorant receptor gene products
10 have thus far been characterized through homology as seven transmembrane domain G protein-coupled receptors (GPCR). It is estimated that there are probably 500-750 OR-like sequences in humans, while there are 500-1000 OR genes in rat and mouse (Mombaerts *Curr. Opin. Genet. Dev.* 1999 9, 315-320). In mice, OR-like sequences make up approximately 1% of their genome, the largest known family in the mammalian genome, surpassing the complexity of
15 even the immunoglobulin and T-cell antigen receptor gene families (Mombaerts, *supra*). The OR are concentrated on the surface of the OSN's mucus coated cilia and it is thought that odorant molecules bind to the OR in the olfactory epithelium and thereby initiate signal transduction. Current interpretation of recent experimental evidence favors the idea that each neuron expresses only one, or very few, ORs. Since mammals can detect at least 10,000 odors and
20 there are approximately 1,000 or fewer ORs, each of the ORs must respond to several odorant molecules, and each odorant molecule must bind to several receptors. It is believed that various receptors respond to discrete parts of an odorant molecule's structure and that an odorant consists of several chemical groups each of which bind a characteristic receptor (Axel *Scientific American* 1995, October, 154-159; Malnic *et al.*, *Cell* 1999 96, 713-723).

25 The main signal transduction pathway mediated by OR homologues in vertebrate species involves G protein-mediated stimulation of adenylyl cyclase activity, resulting in cAMP elevation that opens cyclic-nucleotide gated channels with a non-specific cation selectivity (Mombaerts *Curr. Opin. Genet. Dev.* 1999 9, 315-320). However, there are still numerous unanswered questions and recently it has come to light that 38-76% of the human
30 gene OR sequences that are being reported may be pseudogenes and therefore incapable of expressing the proteins that encode the olfactory receptors. Some of the incidences may be due to the method of extracting the genomic DNA libraries (Mombaerts, *supra*). Few pseudogenes have been found in other vertebrates and their incidence in libraries from testicular DNA is also

rare (Hildebrand *et al.*, *Annu. Rev. Neurosci.*, 1997, 20, 595-631). cDNA should not contain pseudogenes. There are a number of examples of ORs which have been successfully expressed and reactions to certain odorant ligands have been determined (Malnic *et al.*, *Cell* 1999 96, 713-723; Mombaerts, *supra*; Zhao *et al.*, *Science* 1998 279, 237-242).

5 Some attempts to express the ORs in heterologous cell lines resulted in the formation of inclusion bodies rather than the insertion of the proteins into the membrane (Kiefer *et al.*, *infra*). However, purification of the receptors after expression in *E. coli* and their insertion into lipid vesicles facilitates the use of these receptors in odorant ligand screening using a combination of photoaffinity labeling and Trp fluorescence (Kiefer *et al.*, *Biochemistry* 1996 10 35, 16077-16084). In addition, a functional human OR receptor protein has been expressed in HEK-293 cells and oocytes and found to interact with odorant ligands (Wetzel *et al.*, *J. Neurosci.* 1999 19, 7426-7433). There have also been, a number of successful efforts of expressing cDNA in insect Sf9 cells using *baculovirus* vectors (Mombaerts *Annu. Rev. Neuorsci.* 1999) as well as assays with neuronal tissue (Malnic *et al.*, *Cell* 1999 96, 713-723; 15 Zhao *et al.*, 1998; Firestein *et al.*, WO 98/50081). In addition, recent work accomplished the expression of chimeric mouse olfactory receptor sequences in HEK-293 cells and showed their reactivity towards a panel of odorant ligands, some at micromolar concentrations (Krautwurst *et al.*, *Cell* 1998 95 917-926). The drawback to expression in heterologous cell systems is the lack of working signal transduction pathways which can be used to detect responses to odorant 20 ligands; these drawbacks can be overcome with methods known in the art (e. g. U.S. Pat. No. 5,798, 275). There are also methods of expressing and assaying functional neuronal receptors in neuronal cells, including methods for detecting particular odorant ligand specificity (Malnic *et al.*, *supra*; Zhao, *supra*; Firestein *et al.*, *supra*).

25 Other publications of interest are: Chemical Senses 6: 343-349 (1981); Proc. Natl. Acad. Sci. USA 79: 670-674 (1982); Proc. Natl. Acad. Sci. USA 81(6): 1859-1863 (1984); Nature 316: 255-258 (1985); Brain Research 368: 329-338 (1986); J. Biol. Chem. 261: 1299-1305 (1986); Proc. Natl. Acad. Sci. USA 83(13): 4947-4951 (1986); J. Neurosci. 6: 2146-2154 (1986); J. Neurochem. 47: 1527-1533 (1986); Chemical Senses 13: 191-204 30 (1988); Biochem. J. 260:121-126 (1989); J. Biol Chem. 264: 6780-6785 (1989); Biochim. Biophys. Acta 1013: 68-72 (1989); J. Biol. Chem. 264: 18803-18807 (1989); Biochemistry 29: 7433-7440 (1990); FEBS lett. 270: 24-29 (1990); Chemical Senses 15: 529-536 (1990); Eur. J. Biochem. 196: 51-58 (1991); Nature 349: 790-793 (1991); Neurosci. Lett. 141: 115-

118 (1992); Developmental Brain Res. 73: 7-16 (1993); Proc. Natl. Acad. Sci., USA 90: 3715-3719 (1993); Human Mol. Genetics 3: 229-235 (1994); Eur. J. Biochem. 225: 1157-1168 (1994); European Journal of Biochemistry 238: 28-37 (1996); Receptors and Channels 4: 141-147 (1996); Genomics 37(2): 147-160 (1996); Protein Science 8: 969-977 (1999); Genomics 53: 56-68 (1998); Genomics 61:24-36 (1999); Genomics 63: 227-245 (2000); Trends in Neurosci. 7:35-36 (1984); Ann. Rev. Neurosci. 9:329-355 (1986); Trends Biochem. Sci. 12:63-66 (1987); Nature 351: 275-276 (1991); Nature 353: 799-800 (1991); Current Biol. 3(10): 668-674 (1993); Nature 372:321-322 (1994); Essays in Biochemistry. 33: 93-104 (1998); and Nature, 398 (6725): 285-287 (1999).

10 However, despite the forgoing, there has been relatively little work with human olfactory receptors, in particular in determining the sequences of large numbers of receptors, and less progress in determining the correspondence between particular human olfactory receptors and the scent(s) to which they respond.

15 All publications cited herein are hereby incorporated by reference in their entirety.

DISCLOSURE OF THE INVENTION

20 An object of the invention is to determine the correspondence between ORs and the scent(s) to which they respond. Once this is accomplished, scents can be both analyzed and re-created for enhancing human experiences or eliciting particular responses. The present invention pertains to isolated polynucleotide sequences encoding polypeptides involved in olfactory sensation. The present invention also pertains to the proteins encoded by said nucleotide sequences. The present invention also encompasses vectors comprising the
25 nucleotide sequences of the invention and further, host cells transfected with said vectors. The present invention also allows for the determination of primary scents and the identification of the odor receptors which are encoded to detect these primary scents as well as the determination of receptor complex scent components and the identification of combinations of odor receptors which are encoded to detect such receptor complex scent
30 components scents.

The invention provides isolated polynucleotide sequences encoding polypeptides involved in olfactory sensation that are isolated from human olfactory epithelial tissue. The invention further provides expression vectors containing such nucleotide sequences. Also provided by the invention are purified polypeptides encoded by the nucleotide sequences. The invention further provides transformed cells which comprise a suitable host cell transfected with a suitable expression vector containing the nucleotide sequence encoding the receptor. The present invention also encompasses nucleotide sequences isolated from human olfactory epithelial tissue which encode receptors capable of binding odorant molecules. The invention further provides expression vectors containing such nucleotide sequences and homologues of both the polynucleotides and polypeptides. Further, the invention provides a means of using the nucleotide sequences of the invention in a method of screening odorant ligands to determine the specific binding of odorant molecules to a particular receptors, and further, determining the component odorant molecules of subjectively experienced smells, determining the combination odorant molecules and receptor stimulation or inhibition to re-create a particular scent. The binding of odorant molecules by the receptors encompassed in the present invention includes binding resulting in both the agonism (excitation/activation) and antagonism (inhibition/blocking) of receptor function(s) upon binding of the molecule.

Accordingly, the invention includes an isolated polynucleotide comprising a sequence encoding a polypeptide which is involved in olfactory sensation. The OR polypeptides encoded are found within the sequences depicted in polynucleotide sequences SEQ ID NO:1 through SEQ ID NO: 73 and SEQ ID NO:111 through SEQ ID NO:152, or a nucleotide sequence at least 95% homologous to said sequences. The invention also encompasses the translation products of those sequences. The invention further comprises expression vectors comprising said sequences, host cells containing such expression vectors and/or expressing the polypeptide encoded therein, or phage displaying the polypeptide encoded by the sequences. The use of functional fragments of receptors is also encompassed by the invention. Preparations of receptors, further including biological or synthetic molecules which maintain the stability and functional structure of the receptors, are also included in the invention. The invention further encompasses fragments of said polynucleotides which can be used as probes or primers to identify additional polynucleotide sequences through techniques known in the art, including those fragments depicted in SEQ ID NOs: 74-105.

The invention also includes additional isolated polynucleotide comprising a sequence encoding a polypeptide which is involved in olfactory sensation. The OR polypeptides

encoded are found within the sequences depicted in polynucleotide sequences SEQ ID NO:153 through SEQ ID NO: 1084, or a nucleotide sequence at least 95% homologous to said sequences. The invention also comprises the translation products of those sequences. The invention further comprises expression vectors comprising said sequences, host cells containing
5 such expression vectors and/or expressing the polypeptide encoded therein, or phage displaying the polypeptide encoded by the sequences. The use of functional fragments of receptors is also encompassed by the invention. Preparations of receptors, further including biological or synthetic molecules which maintain the stability and functional structure of the receptors, are also included in the invention.

10 The invention also encompasses an isolated and purified olfactory receptor polypeptide comprising the sequence of SEQ ID NO: 1085 through SEQ ID NO: 2008, or a polypeptide sequence that is at least about 95% homologous to a polypeptide sequence of the group consisting of SEQ ID NO: 1085 through SEQ ID NO: 2008 and having olfactory receptor function. Host cells expressing such polypeptides and phages displaying such
15 polypeptides are also encompassed by the invention. The use of functional fragments of receptors is also encompassed by the invention. Preparations of receptors, further including biological or synthetic molecules which maintain the stability and functional structure of the receptors, are also included in the invention.

Scents can be captured, analyzed and recorded by a sensory device using various
20 methods. Scent capture can be initiated by the user or by an automatic sensing system. A scent can be analyzed in terms of its interaction with olfactory neurons of a mammalian, preferably human, olfactory system, or by the expression of individual receptors under appropriate conditions and appropriate assay conditions in multiwell plates or in terms of its perception by a panel of mammalian, preferably human, subjects. The interaction with olfactory neurons can
25 be determined experimentally, in vitro, by determining the interaction of an odorant with olfactory receptors of a given type. Alternatively, the interaction with olfactory receptor can be determined using a computer simulation which provides information regarding the interaction of an odorant with the olfactory receptors. A panel of subjects can be used to represent odors in terms of their perception. The data so generated can be used to represent a scent in a manner
30 which can be recorded in digital or other format, stored in media such as computer memory, disks, or printed format, and transmitted over a data network. The representation of the scent can be used to re-create the scent at a local or remote site using an emitter module. The

representation of the scent allows for scent editing, where desirable aspects of an odor are enhanced or added and undesirable aspects are attenuated or eliminated.

Accordingly, the invention also embraces libraries of olfactory receptors suitable for determining the interaction pattern of a composition with the receptors, comprising the
5 expression products of at least two polynucleotides of SEQ ID NO:1 through SEQ ID NO: 73, SEQ ID NO:111 through SEQ ID NO:152, and SEQ ID NO: 153 through SEQ ID NO: 1084, where the polynucleotides encode functional olfactory receptors; or functional fragments of the expression products. Libraries of at least 50, 100, 200, or 500 receptors are also encompassed by the invention.

10 Also encompassed by the invention are libraries of olfactory receptors suitable for determining the interaction pattern of a composition with the receptors, comprising at least two polypeptides of SEQ ID NO: 1085 through SEQ ID NO: 2008, where the polypeptides are functional olfactory receptors; or functional fragments of the polypeptides. Libraries of at least 50, 100, 200, or 500 receptors are also encompassed by the invention.

15 The invention also embraces methods for determining the binding pattern of a composition with olfactory receptors, involving exposing the composition to an olfactory receptor library, and determining whether the composition binds to each olfactory receptor, thereby determining the overall binding pattern of the composition. In additional embodiments, the method also involves determining the approximate binding constant with
20 which the composition, or the various chemicals within the composition, bind to the receptors; determining whether a receptor or functional fragment thereof is activated; and determining the absolute amount of activation, or amount of activation relative to another receptor or a control substance. The composition can consist essentially of one compound or chemical, or can comprise at least two compounds or chemicals.

25 The invention also embraces DNA arrays or DNA chips comprising the DNA segments derived from any combination of, or each of, SEQ ID NO: 153 through SEQ ID NO: 1084. The invention also embraces a method of determining differences among one or more individuals with respect to their olfactory faculties, comprising the steps of comparing the olfactory DNA of each individual against the array or chip.

30 The invention also embraces a method to determine single nucleotide polymorphisms in olfactory receptors, comprising the steps of uniquely amplifying olfactory receptor sequences from DNA obtained from one or more individuals, based on

primers designed according to the first 25 bases and the last 25 bases of any combination of, or each of, SEQ ID NO: 153 through SEQ ID NO: 1084, and determining the similarities and differences between said amplified DNA and the corresponding receptor from SEQ ID NO: 153 through SEQ ID NO: 1084.

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Brief Description of the Drawings

Figure 1 depicts the isolated polynucleotide sequences, which encode polypeptides involved in olfactory sensation, corresponding to SEQ ID NOs: 1 - 73.

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Figure 2 depicts the isolated polynucleotide sequences, which encode polypeptides involved in olfactory sensation, corresponding to SEQ ID NOs: 111 - 152.

Detailed Description of the Invention

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The present invention provides isolated polynucleotides comprising sequences that encode polypeptides which are involved in olfactory sensation and which can be used to screen odorant ligands, e.g., odorant receptor agonists and antagonists.

Definitions

20

The term "olfactory receptor" (OR) refers to a polypeptide involved in olfactory sensation. An "olfactory receptor polynucleotide" or "OR polynucleotide" is a polynucleotide encoding a polypeptide involved in olfactory sensation.

The term "odorant ligand" as employed herein refers to a molecule that has the potential to bind to an olfactory receptor. Equivalent terms employed herein include "odorant", "odorant molecule" and "odorant compound". The term "binding" or "interaction" as used herein with respect to odorant ligands refers to the interaction of ligands with the receptor polypeptide where the ligands may serve as either agonists and/or antagonists of a given receptor or receptor function. An odorant ligand may thus directly cause a perception of odor (an agonist), or may block the perception of odor (an antagonist). An odorant ligand may include, but is not limited to, molecules which interact with polypeptides involved in olfactory

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sensation. Odorant ligands and molecules which interact with olfactory receptors are generally small, approximately 1000 Daltons, more preferably approximately 750 Daltons, more preferably approximately 500 Daltons, or even more preferably approximately 300 Daltons, hydrophobic molecules with a variety of functional groups. Small changes in structure can induce profound changes in odorant ligand binding and hence in the odor perceived by an individual.

A more detailed description of these sequences, as well as how these sequences were obtained, is provided below.

As used herein, a "polynucleotide" is a polymeric form of nucleotides of any length, which contain deoxyribonucleotides, ribonucleotides, and/or their analogs. The terms "polynucleotide", "nucleotide" and "nucleic acid" as used herein are used interchangeably. Polynucleotides may have any three-dimensional structure, and may perform any function, known or unknown. The term "polynucleotide" includes double-, single-stranded, and triple-helical molecules. Unless otherwise specified or required, any embodiment of the invention described herein that is a polynucleotide encompasses both the double-stranded form and each of two complementary single-stranded forms known or predicted to make up the double stranded form. Not all linkages in a polynucleotide need be identical.

The following are non-limiting examples of polynucleotides: a gene or gene fragment, exons, introns, mRNA, tRNA, rRNA, ribozymes, cDNA, recombinant polynucleotides, branched polynucleotides, plasmids, vectors, isolated DNA of any sequence, isolated RNA of any sequence, nucleic acid probes, primers, and adaptors. A polynucleotide may comprise modified nucleotides, such as methylated nucleotides and nucleotide analogs. The use of uracil as a substitute for thymine in a deoxyribonucleic acid is also considered an analogous form of pyrimidine.

In the context of polynucleotides, a "linear sequence" or a "sequence" is an order of nucleotides in a polynucleotide in a 5' to 3' direction in which residues that neighbor each other in the sequence are contiguous in the primary structure of the polynucleotide. A "partial sequence" is a linear sequence of part of a polynucleotide which is known to comprise additional residues in one or both directions.

If present, modification to the nucleotide structure may be imparted before or after assembly of the polymer. The sequence of nucleotides may be interrupted by non-nucleotide components. A polynucleotide may be further modified after polymerization, such as by

conjugation with a labeling component. Other types of modifications included in this definition are, for example, "caps", substitution of one or more of the naturally occurring nucleotides with an analog, internucleotide modifications such as, for example, those with uncharged linkages (e.g., methyl phosphonates, phosphotriesters, phosphoamidates, carbamates, etc.) and with charged linkages (e.g., phosphorothioates, phosphorodithioates, etc.), those containing pendant
5 moieties, such as, for example, proteins (e.g., nucleases, toxins, antibodies, signal peptides, poly-L-lysine, etc.), those with intercalators (e.g., acridine, psoralen, etc.), those containing chelators (e.g., metals, radioactive metals, boron, oxidative metals, etc.), those containing alkylators, those with modified linkages (e.g., α -anomeric nucleic acids, peptide nucleic acids, etc.), as well as unmodified forms of the polynucleotide(s).
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Further, any of the hydroxyl groups ordinarily present in the sugars may be replaced by phosphonate groups, phosphate groups, protected by standard protecting groups, or activated to prepare additional linkages to additional nucleotides, or may be conjugated to solid supports. The 5' and 3' terminal OH groups can be phosphorylated or substituted with amines or organic
15 capping group moieties of from 1 to 20 carbon atoms. Other hydroxyls may also be derivatized to standard protecting groups.

Polynucleotides can also contain analogous forms of ribose or deoxyribose sugars that are generally known in the art, including, but not limited to, 2'-O-methyl-, 2'-O-allyl, 2'-fluoro- or 2'-azido-ribose, carboxycyclic sugar analogs, α -anomeric sugars, epimeric sugars such
20 as arabinose, xyloses or lyxoses, pyranose sugars, furanose sugars, sedoheptuloses, acyclic analogs and abasic nucleoside analogs such as methyl riboside.

Although conventional sugars and bases will be used in applying the method of the invention, substitution of analogous forms of sugars, purines and pyrimidines can be advantageous in designing a final product, as can alternative backbone structures like a
25 polyamide backbone such as those used in peptide nucleic acids (PNAs).

A polynucleotide or polynucleotide region has a certain percentage (for example, 75%, 80%, 85%, 90%, 95% or 99%) of "sequence identity" to another sequence means that, when aligned, that percentage of bases are the same in comparing the two sequences.

Homology, as described herein, means that the polypeptide sequences that are encoded
30 by the nucleic acids demonstrate a certain relatedness (i.e., there exists regions of conserved amino acids), but not the same amino acid identity. There is complete or 100% homology at a particular amino acid residue when the amino acids of sequences being compared are the same (there is identity) or represent a conservative amino acid substitution (there is homology). A

“conservative amino acid substitution” occurs when a particular amino acid is substituted by an alternate amino acid of similar charge density, hydrophobicity/hydrophilicity, size and/or configuration (e.g., Val for Ile). A “nonconservative amino acid substitution” occurs when a particular amino acid is substituted by an alternative amino acid of differing properties, that is, charge density, hydrophobicity/hydrophilicity, size and/or configuration (e.g., Val for Tyr). The nucleic acid sequences within the scope of the present invention include those nucleic acids which differ in exact sequence from those listed in SEQ ID NO:1 through SEQ ID NO:73 and SEQ ID NO:111 through SEQ ID NO:152 but which encode identical or homologous polypeptide amino acid sequences.

A “primer” is a short polynucleotide, generally with a free 3' -OH group, that binds to a target potentially present in a sample of interest by hybridizing with the target, and thereafter promoting polymerization of a polynucleotide complementary to the target.

An “adaptor” is a short, partially-duplexed polynucleotide that has a blunt, double-stranded end and a protruding, single-stranded end. It can be ligated, through its double-stranded end, to the double-stranded end of another polynucleotide. This provides known sequences at the ends of thus modified polynucleotides. Often adaptors contain specific sequences for primer binding and/or restriction endonuclease digestion.

A “probe” when used in the context of polynucleotide manipulation refers to a polynucleotide which is provided as a reagent to detect a target potentially present in a sample of interest by hybridizing with the target. Usually, a probe will comprise a label or a means by which a label can be attached, either before or subsequent to the hybridization reaction. Suitable labels include, but are not limited to radioisotopes, fluorochromes, chemiluminescent compounds, dyes, and enzymes.

“Transformation” or “transfection” refers to the insertion of an exogenous polynucleotide into a host cell, irrespective of the method used for the insertion, for example, lipofection, transduction, infection or electroporation. The exogenous polynucleotide may be maintained as a non-integrated vector, for example, a plasmid, or alternatively, may be integrated into the host cell genome.

A polynucleotide is said to “encode” a polypeptide if, in its native state or when manipulated by methods well known to those skilled in the art, it can be transcribed and/or translated to produce the polypeptide, a homologous polypeptide or a fragment thereof. For purposes of this invention, and to avoid cumbersome referrals to complementary strands, the anti-sense (or complementary) strand of such a polynucleotide is also said to encode the

sequence; that is, a polynucleotide sequence that “encodes” a polypeptide includes both the conventional coding strand and the complementary sequence (or strand).

The terms “polypeptide”, “oligopeptide”, “peptide” and “protein” are used interchangeably herein to refer to polymers of amino acids of any length. The polymer may be linear or branched, it may comprise modified amino acids, it may be interrupted by non-amino acids, and it may be assembled into a complex of more than one polypeptide chain. The terms also encompass an amino acid polymer that has been modified naturally or by intervention; for example, disulfide bond formation, glycosylation, lipidation, acetylation, phosphorylation, or any other manipulation or modification, such as conjugation with a labeling component. Also included within the definition are, for example, polypeptides containing one or more analogs of an amino acid (including, for example, unnatural amino acids, etc.), as well as other modifications known in the art.

In the context of polypeptides, a “linear sequence” or a “sequence” is an order of amino acids in a polypeptide in an N-terminal to C-terminal direction in which residues that neighbor each other in the sequence are contiguous in the primary structure of the polypeptide. A “partial sequence” is a linear sequence of part of a polypeptide which is known to comprise additional residues in one or both directions.

“Recombinant,” as applied to a polynucleotide or gene, means that the polynucleotide is the product of various combinations of cloning, restriction and/or ligation steps, and other procedures that result in a construct that is distinct from a polynucleotide found in nature.

A “vector” is a self-replicating nucleic acid molecule that can be used to transfer an inserted nucleic acid molecule into and/or between host cells. The term includes vectors that function primarily for insertion of a nucleic acid molecule into a cell, vectors that function primarily for the amplification of nucleic acid, and expression vectors that function for transcription and/or translation of the DNA or RNA. Also included are vectors that provide more than one of the above functions.

“Expression vectors” are defined as polynucleotides which, when introduced into an appropriate host cell, can be transcribed into a mRNA capable of being translated into a polypeptide(s). An expression vector also comprises control elements operatively linked to the coding region to enable and/or facilitate expression of the polypeptide in the target cell. These can include transcriptional, translational, posttranscriptional, and posttranslational control elements, as are known in the art. An “expression system” usually connotes a suitable host cell comprised of an expression vector that can function to yield a desired expression product.

A "host cell" includes an individual cell or cell culture which can be or has been a recipient for vector(s) or for incorporation of nucleic acid molecules and/or proteins. Host cells include progeny of a single host cell, and the progeny may not necessarily be completely identical (in morphology or in genomic or total DNA complement) to the original parent cell
5 due to natural, accidental, or deliberate mutation. A host cell includes cells transfected in vivo with a polynucleotide(s) of this invention.

A "cell line" or "cell culture" denotes eukaryotic cells, derived from higher, multicellular organisms, grown or maintained in vitro. It is understood that the descendants of a cell may not be completely identical (either morphologically, genotypically, or phenotypically) to the parent cell.
10 Cells described as "uncultured" are obtained directly from a living organism, and are generally maintained for a limited amount of time away from the organism (i.e., not long enough or under conditions for the cells to undergo substantial replication).

As used herein, "expression" includes transcription and/or translation.

"Heterologous" means derived from (i.e., obtained from) a genotypically distinct entity
15 from the rest of the entity to which it is being compared. For example, a polynucleotide may be placed by genetic engineering techniques into a plasmid or vector derived from a different source, thus becoming a heterologous polynucleotide. A promoter which is linked to a coding sequence with which it is not naturally linked is a heterologous promoter.

An "isolated" or "purified" polynucleotide, polypeptide or cell is one that is
20 substantially free of the materials with which it is associated in nature. By substantially free is meant at least 50%, preferably at least 70%, more preferably at least 80%, even more preferably at least 90%, even more preferably at least 99%, and even more preferably at least 99.9% free of the materials with which it is associated in nature. As used herein, an "isolated" polynucleotide or polypeptide also refers to recombinant polynucleotides or polypeptides,
25 which, by virtue of origin or manipulation: (1) are not associated with all or a portion of a polynucleotide or polypeptide with which they are associated in nature, (2) are linked to a polynucleotide or polypeptide other than that to which they are linked in nature, or (3) do not occur in nature, or (4) in the case of polypeptides, arise from expression of recombinant polynucleotides. Thus, for example, an isolated substance may be prepared by using a
30 purification technique to enrich it from a source mixture. Enrichment can be measured on an absolute basis, such as weight per volume of solution, by specific activity or it can be measured in relation to a second, potentially interfering substance present in the source mixture. Increasing enrichments of the embodiments of this invention are increasingly more preferred.

Thus, for example, a 2-fold enrichment is preferred, 10-fold enrichment is more preferred, 100-fold enrichment is more preferred, 1000-fold enrichment is even more preferred. A substance can also be provided in an isolated state by processes such as chemical synthesis or recombinant expression.

5 A "reagent" polynucleotide, polypeptide, or antibody, is a substance provided for a reaction, the substance having some known and desirable function in the reaction. A reaction mixture may also contain a "target", such as a polynucleotide, antibody, polypeptide, or assembly of polypeptides that the reagent is capable of reacting with. For example, in some types of diagnostic tests, the presence and/or amount of the target in a sample is determined by
10 adding a reagent, allowing the reagent and target to react, and measuring the amount of reaction product (if any).

 "Hybridization" refers to a reaction in which one or more polynucleotides react to form a complex that is stabilized via hydrogen bonding between the bases of the nucleotide residues. The hydrogen bonding may occur by Watson-Crick base pairing, Hoogsteen binding, or in any
15 other sequence-specific manner. The complex may comprise two strands forming a duplex structure, three or more strands forming a multi-stranded complex, a single self-hybridizing strand, or any combination of these. A hybridization reaction may constitute a step in a more extensive process, such as the initiation of an amplification reaction such as PCR, or the enzymatic cleavage of a polynucleotide by a ribozyme.

20 When hybridization occurs in an antiparallel configuration between two single-stranded polynucleotides, those polynucleotides are described as "complementary". A double-stranded polynucleotide can be "complementary" to another polynucleotide if hybridization can occur between one of the strands of the first polynucleotide and the second. The degree to which one polynucleotide is complementary with another is quantifiable in terms of the proportion of bases in
25 opposing strands that are expected to form hydrogen bonds with each other, according to generally accepted base-pairing rules of A-T, A-U and G-C.

 A "stable duplex" of polynucleotides, or a "stable complex" formed between any two or more components in a biochemical reaction, refers to a duplex or complex that is sufficiently long-lasting to persist between formation of the duplex or complex and subsequent detection,
30 including any optional washing steps or other manipulation that may take place in the interim.

 A substance is said to be "selective" or "specific" if it reacts or associates more frequently, more rapidly, with greater duration and/or with greater affinity with a particular cell or substance than it does with alternative cells or substances. An odorant ligand "specifically

binds" to a target if it binds with greater affinity, avidity, more readily, and/or with greater duration than it binds to other substances.

As used herein, "naturally occurring," "native," or "wild type" refers to endogenous polynucleotides and the protein(s) expressed thereby. These terms include full-length and
5 processed polynucleotides and polypeptides. Processing can occur in one or more steps, and these terms encompass all stages of processing. For instance, polypeptides having or lacking a signal sequence are encompassed by the invention. "Non-naturally occurring", "non-native", or "non-wild type" refer to all other polynucleotides and polypeptides.

A "polymerase chain reaction" ("PCR") is a reaction in which replicate copies are made
10 of a target polynucleotide using one or more primers, and a catalyst of polymerization, such as a reverse transcriptase or a DNA polymerase, and particularly a thermally stable polymerase enzyme. Methods for PCR are taught in U.S. Patent Nos. 4,683,195 (Mullis) and 4,683,202 (Mullis et al.). All processes of producing replicate copies of the same polynucleotide, such as PCR or gene cloning, are collectively referred to herein as "amplification."

According to this invention, a "genomic DNA library" is a clone library which contains
15 representative nucleotide sequences from the DNA of a given genome. It is constructed using various techniques that are well known in the art, for instance, by enzymatically or mechanically fragmenting the DNA from an organism, organ, or tissue of interest, linking the fragments to a suitable vector, and introducing the vector into appropriate cells so as to
20 establish the genomic library. A genomic library contains both transcribed DNA fragments as well as nontranscribed DNA fragments.

In comparison, a "cDNA library" is a clone library that differs from a genomic library in that it contains only transcribed DNA sequences and no nontranscribed DNA sequences. It is established using techniques that are well known in the art, i.e., selection of mRNA (e.g. by
25 polyA) making single stranded DNA from a population of cytoplasmic mRNA molecules using the enzyme RNA-dependent DNA polymerase (i.e., reverse transcriptase), converting the single-stranded DNA into double-stranded DNA, cloning the resultant molecules into a vector, and introducing the vector into appropriate cells so as to establish the cDNA library.

Alternately, a cDNA library need not be cloned into a vector and/or established in cells, but can
30 be screened using PCR with gene-specific primers, as is well known in the art.

An "individual" is a vertebrate, preferably a mammal, more preferably a human.

General Techniques

The practice of the present invention will employ, unless otherwise indicated, conventional techniques of molecular biology (including recombinant techniques), microbiology, cell biology and biochemistry, which are within the skill of the art. Such techniques are explained fully in the literature, such as: "Molecular Cloning: A Laboratory Manual", second edition (Sambrook et al., 1989); "Oligonucleotide Synthesis" (M.J. Gait, ed., 1984); "Animal Cell Culture" (R.I. Freshney, ed., 1987); "Methods in Enzymology" (Academic Press, Inc.); "Gene Transfer Vectors for Mammalian Cells" (J.M. Miller & M.P. Calos, eds., 1987); "Current Protocols in Molecular Biology" (F.M. Ausubel et al., eds., 1987 and annual updates); "PCR: The Polymerase Chain Reaction", (Mullis et al., eds., 1994); "Current Protocols in Immunology" (J.E. Coligan et al., eds., 1991).

Basis for identification and description of the polynucleotides and polypeptides

The polynucleotide sequences were identified using oligonucleotide primers which were complementary to OR membrane-spanning regions. A number of different primers were used to elicit a variety of nucleotide sequences which encode polypeptides involved in olfactory sensation. The identification and isolation of nucleotide sequences which encode polypeptides involved in olfactory sensation and the polypeptides that they encode is vital for determining the response of receptors to odorant molecules, the elucidation of scent representations, profiles, or fingerprints, the reproduction of scent representations, profiles, or fingerprints and the editing of scent representations, profiles, or fingerprints.

Polynucleotides encoding polypeptides involved in olfactory sensation

The present invention provides isolated polynucleotides encoding polypeptides which are involved in olfactory sensation, vectors containing these polynucleotides, host cells containing these polynucleotides, and compositions comprising these polynucleotides. These polynucleotides are isolated and/or produced by chemical and/or recombinant methods, or a combination of these methods. The present invention includes polynucleotides isolated from the human olfactory epithelium which encode polypeptides which are involved in olfactory sensation, vectors containing these polynucleotides, host cells containing these polynucleotides, and compositions comprising these polynucleotides. Unless specifically stated otherwise,

“polynucleotides” shall include all embodiments of the polynucleotides of this invention. These polynucleotides are useful as probes, primers, in expression systems, and, in a preferred embodiment, in screening methods as described herein. In one embodiment the polynucleotides of the present invention can be isolated by creating a cDNA library using
5 template RNA from human olfactory epithelium tissue. A detailed example is related in Example 1, below.

The advantage of constructing a cDNA library for isolation of the desired nucleotide sequences is that the likelihood of obtaining pseudogenes is greatly reduced compared to using a genomic DNA library for the same purpose. cDNA libraries contain only mRNA expressed
10 in the tissue used for the construction of the library, in this case, the human olfactory epithelium. The preferred olfactory epithelium tissue should express only those nucleotide sequences which are relevant for olfactory function, thereby excluding nonfunctioning pseudogenes and also GPCRs which may be similar in primary structure (amino acid sequence) but are not encoded in OSNs. As the number of GPCRs utilized in human signal transduction
15 pathways is extremely wide and varied, cDNA libraries constructed using olfactory tissue are preferable for isolating nucleotide sequences that encode polypeptides which are involved in olfactory sensation, inasmuch as genomic libraries can contain abundant nucleotide sequences which encode for a variety of GPCRs performing numerous functions, and are likely to contain pseudogenes.

The isolation of polynucleotide sequences which encode polypeptides involved in olfactory sensation is described in Example 1. Accordingly, this invention provides isolated polynucleotides that contain sequences encoding polypeptides or portions thereof which are involved in olfactory sensation, wherein the polypeptide is at least 10 amino acids in length, and wherein the polynucleotide sequences are depicted in SEQ ID NOS:1-73 and SEQ ID
20 NOS:111-152.
25

The invention includes modifications to said polynucleotides described above such as deletions, substitutions, additions, or changes in the nature of any nucleic acid moieties. A “modification” is any difference in nucleotide sequence as compared to a polynucleotide shown herein to encode a polypeptide involved in olfactory sensation, and/or any difference in
30 the nucleic acid moieties of the polynucleotide(s), wherein such a modified polynucleotide encodes a polypeptide involved in olfactory sensation or a variant of said polypeptide that is useful in the practice of the invention. Such changes can be useful to facilitate cloning and modify expression of polynucleotides encoding polypeptides which are involved in olfactory

sensation. Such changes also can be useful for conferring desirable properties to the polynucleotide(s), such as stability. The definition of polynucleotide provided herein gives examples of these modifications. Hence, the invention also includes variants of the nucleic acid sequences disclosed herein, which include nucleic acid substitutions, additions, and/or deletions.

The invention also encompasses polynucleotides encoding polypeptides involved in olfactory sensation, including polynucleotides that are full-length, processed, coding, non-coding (including flanking region) or portions thereof, provided that these polynucleotides contain a region encoding at least a portion of a polypeptide involved in olfactory sensation.

(That is, the region encodes a functional fragment of an olfactory receptor or other polypeptide involved in olfactory sensation.) Also embodied are the mRNA, cDNA and genomic DNA sequences and fragments thereof that include a polynucleotide sequence comprising a coding sequence for a portion of a polypeptide involved in olfactory sensation.

Genes encoding human olfactory receptors, and optionally including related genomic sequences such as regulatory sequences, can be obtained using olfactory receptor cDNAs as hybridization probes. Under high stringency hybridization conditions, an OR cDNA will hybridize to its cognate OR gene. Use of lower stringency hybridization conditions allows the isolation of OR genes that are related to, but not identical with, the gene corresponding to a particular OR cDNA.

Conditions for hybridization are well-known to those of skill in the art and can be varied within relatively wide limits. Hybridization stringency refers to the degree to which hybridization conditions disfavor the formation of hybrids containing mismatched nucleotides, thereby promoting the formation of perfectly matched hybrids or hybrids containing fewer mismatches; with higher stringency correlated with a lower tolerance for mismatched hybrids. Factors that affect the stringency of hybridization include, but are not limited to, temperature, pH, ionic strength, and concentration of organic solvents such as formamide and dimethylsulfoxide. As is well known to those of skill in the art, hybridization stringency is increased by higher temperatures and/or lower ionic strengths. See, for example, Ausubel et al., supra; Sambrook et al., supra; M.A. Innis et al. (eds.) PCR Protocols, Academic Press, San Diego, 1990; B.D. Hames et al. (eds.) Nucleic Acid Hybridisation: A Practical Approach, IRL Press, Oxford, 1985; and van Ness et al., (1991) Nucleic Acids Res. 19:5143-5151. The degree of stringency can be adjusted not only during a hybridization reaction, but also in post-hybridization washes, as is known to those of skill in the art.

The invention also encompasses polynucleotides encoding polypeptides involved in olfactory sensation, functionally equivalent variants and derivatives of full-length polypeptides involved in olfactory sensation and functionally equivalent fragments. For instance, changes in a DNA sequence that do not change the encoded amino acid sequence, as well as those that result in conservative substitutions of amino acid residues, non-deleterious non-conservative substitutions, one or a few amino acid deletions or additions, and substitution of amino acid residues by amino acid analogs, will not significantly affect properties of the encoded polypeptide. Polypeptides homologous to the polypeptides encoded by the polynucleotides described herein can also be identified using algorithms and methods well-known to those of skill in the art, such as those described in Ausubel, "Current Protocols in Molecular Biology," Chapter 19; see also Altschul, S.F., Gish, W., Miller, W., Myers, E.W. & Lipman, D.J. (1990) "Basic local alignment search tool." J. Mol. Biol. 215:403-410; Gish, W. & States, D.J. (1993) "Identification of protein coding regions by database similarity search." Nature Genet. 3:266-272; Madden, T.L., Tatusov, R.L. & Zhang, J. (1996) "Applications of network BLAST server" Meth. Enzymol. 266:131-141; Altschul, S.F., Madden, T.L., Schäffer, A.A., Zhang, J., Zhang, Z., Miller, W. & Lipman, D.J. (1997) "Gapped BLAST and PSI-BLAST: a new generation of protein database search programs." Nucleic Acids Res. 25:3389-3402; and Zhang, J. & Madden, T.L. (1997) "PowerBLAST: A new network BLAST application for interactive or automated sequence analysis and annotation." Genome Res. 7:649-656. A preferred method of determining homology is the BLAST set of similarity search programs (Altschul, S.F., Gish, W., Miller, W., Myers, E.W. & Lipman, D.J. (1990) "Basic local alignment search tool." J. Mol. Biol. 215:403-410. Polypeptides which are 40% homologous, 50% homologous, 60% homologous, 70% homologous, 80% homologous, 90% homologous, 95% homologous, or 99% homologous to the polypeptides encoded by the polynucleotides described herein are encompassed by the invention.

Nucleotide substitutions that do not alter the amino acid residues encoded can be useful for optimizing gene expression in different systems. Suitable substitutions are known to those of skill in the art and are made, for instance, to reflect preferred codon usage in the particular expression systems. In another example, alternatively spliced polynucleotides can give rise to different functionally equivalent fragments or variants of an polypeptide involved in olfactory sensation. Alternatively processed polynucleotide sequence variants are defined as polynucleotide sequences corresponding to mRNAs that differ in sequence from one another but are derived from the same genomic region, for example, mRNAs that result from: 1) the

use of alternative promoters; 2) the use of alternative polyadenylation sites; and/or 3) the use of alternative splice sites.

Preparation of polynucleotides involved in olfactory sensation

5 The polynucleotides of this invention can be obtained using chemical synthesis, recombinant methods, or PCR.

Methods of chemical polynucleotide synthesis are well known in the art and need not be described in detail herein. One of skill in the art can use the sequences provided herein and a commercial DNA synthesizer to produce a desired DNA sequence.

10 For preparing polynucleotides which encode polypeptides involved in olfactory sensation using recombinant methods, a polynucleotide comprising a desired sequence can be inserted into a suitable vector, and the vector in turn can be introduced into a suitable host cell for replication and amplification. Polynucleotides may be inserted into host cells by any means known in the art. Cells are transformed by introducing an exogenous polynucleotide by direct
15 uptake, endocytosis, transfection, F-mating, particle bombardment, liposome mediation, or electroporation. Once introduced, an exogenous polynucleotide can be maintained within the cell as a non-integrated vector (such as a plasmid) or integrated into the host cell genome. The polynucleotide encoding a polypeptide involved in olfactory sensation can be isolated from the host cell by methods well known within the art. See, e.g., Sambrook et al. (1989).

20 Alternatively, PCR allows amplification of DNA sequences. PCR technology is well known in the art and is described in U.S. Pat. Nos. 4,683,195, 4,800,159, 4,754,065 and 4,683,202, as well as *PCR: The Polymerase Chain Reaction*, Mullis et al. eds., Birkhausw Press, Boston (1994).

25 RNA can be obtained in a number of ways in an appropriate vector and the vector is transformed into a suitable host cell. When the inserted DNA is transcribed into RNA, the RNA can then be isolated using methods well known to those of skill in the art, as set forth in Sambrook et al., (1989), for example. RNA can also be obtained through in vitro reactions. For example, the polynucleotide, which encodes a polypeptide involved in olfactory sensation, can be inserted into a vector that contains appropriate transcription promoter sequences.

30 Commercially available RNA polymerases will specifically initiate transcription at their promoter sites and continue the transcription process through the adjoining DNA polynucleotides. Placing the polynucleotide sequences which encode polypeptides involved in

olfactory sensation between two such promoters allows the generation of sense or antisense strands of desired RNA.

5 ***Cloning and expression vectors comprising polynucleotide sequences encoding polypeptides involved in olfactory sensation***

The present invention further includes a variety of vectors containing polynucleotides encoding polypeptides involved in olfactory sensation. These vectors can be used for expression of recombinant polypeptides as well as a source of polynucleotides which encode polypeptides involved in olfactory sensation. Cloning vectors can be used to obtain replicate
10 copies of the polynucleotides, which encode polypeptides involved in olfactory sensation, they contain, or as a means of storing the polynucleotides in a depository for future recovery. Expression vectors (and host cells containing these expression vectors) can be used to obtain polypeptides produced from the polynucleotides they contain. Suitable cloning and expression vectors include any known in the art, e.g., those for use in in vitro, bacterial, mammalian, yeast
15 and insect expression systems. Specific vectors and suitable host cells are known in the art and need not be described in detail herein. For example, see Gacesa and Ramji, *Vectors*, John Wiley & Sons (1994).

Cloning and expression vectors typically contain a selectable marker (for example, a gene encoding a protein necessary for the survival or growth of a host cell transformed with the
20 vector), although such a marker gene can be carried on another polynucleotide sequence co-introduced into the host cell. Only those host cells into which a selectable marker has been introduced will survive and/or grow under selective conditions. Typical selectable markers encode protein(s) that (a) confer resistance to antibiotics or other toxins substances, e.g., ampicillin, neomycin, methotrexate, etc.; (b) complement auxotrophic deficiencies; or (c)
25 supply critical nutrients not available from complex media. The choice of the proper marker gene will depend on the host cell, and appropriate genes for different hosts are known in the art. Cloning and expression vectors also typically contain a replication system recognized by the host.

Suitable cloning vectors may be constructed according to standard techniques, or may
30 be selected from a large number of cloning vectors available in the art. While the cloning vector selected may vary according to the host cell intended to be used, useful cloning vectors will generally have the ability to self-replicate in an appropriate host, may possess a single target for one or more particular restriction endonucleases, and/or may carry genes for a marker

that can be used in selecting clones containing the vector. Suitable examples include plasmids and bacterial viruses, e.g., pUC18, pUC19, m13mp18, m13mp19, pBR322, pMB9, ColE1, pCR1, RP4, phage DNAs, and shuttle vectors such as pSA3 and pAT28. These and many other cloning vectors are available from commercial vendors such as BioRad, Stratagene, and

5 Invitrogen.

Expression vectors generally are replicatable polynucleotide constructs that contain a polynucleotide encoding an polypeptide involved in olfactory sensation of interest. The polynucleotide, which encodes a polypeptide involved in olfactory sensation, encoding the polypeptide is operatively linked to suitable transcriptional controlling elements, such as

10 promoters, enhancers and terminators. For expression (i.e., translation), one or more translational controlling elements are also usually required, such as ribosome binding sites, translation initiation sites, and stop codons. These controlling elements (transcriptional and translational) may be derived from the gene encoding polypeptides involved in olfactory sensation, or they may be heterologous (i.e., derived from other genes and/or other organisms).

15 A polynucleotide sequence encoding a signal peptide can also be included to allow a polypeptide involved in olfactory sensation to cross and/or lodge in cell membranes or be secreted from the cell. A number of expression vectors suitable for expression in eukaryotic cells including yeast, insect, avian, plant and mammalian cells are known in the art. Common vectors, such as YEp13 and the Sikorski series pRS303-306, 313-316, 423-426 can also be

20 used. Vectors pDBV52 and pDBV53 are suitable for expression. Another example of an expression vector/host cell system is the baculovirus (e.g., nuclear polyhedrosis virus)/insect cell (e.g., sf9 cells) system.

Human olfactory receptor polypeptides are expressed from olfactory receptor cDNA by methods well-known to those of skill in the art. A cDNA or portion thereof is inserted in an

25 expression vector using standard molecular cloning techniques. Coupled in vitro transcription and translation of such a vector results in expression of the OR protein encoded by the cDNA. In vivo expression of a OR polypeptide is accomplished by inserting an OR cDNA into a eucaryotic or procaryotic expression vector, of which many are known in the art, to generate an OR expression construct. The OR expression construct is introduced into an appropriate

30 host cell in which the OR sequences are expressed (by transcription and translation) and optionally secreted, and the expressed OR polypeptide is obtained from the cell growth medium and/or from cell lysates.

A number of expression vectors are known in the art. Prokaryotic expression vectors include, but are not limited to, T7 RNA polymerase/T7 promoter-based vectors, bacteriophage λ -based vectors and various types of fusion vectors. Fusion vectors include, but are not limited to, lacZ and trpE fusion vectors, maltose binding protein fusion vectors, glutathione-S-transferase fusion vectors, and thioredoxin fusion vectors. Baculovirus-based vectors are used for expression in insect cell systems. Expression in mammalian cells (such as HEK, COS and CHO cells) utilizes vectors containing a mammalian origin of replication (such as, for example, a SV40 origin), an efficient promoter (optionally including one or more enhancer sequences), mRNA processing signals (e.g., splice sites and polyadenylation sites), one or more selectable markers, and optionally a prokaryotic replicon to allow propagation and manipulation of the construct in prokaryotic cells. Alternatively, expression in mammalian cells is achieved through the use of any of a number of mammalian viral vectors including, but not limited to, retroviruses, lentiviruses, Semliki Forest viruses, vaccinia viruses, adenoviruses and adeno-associated viruses.

Vectors containing the polynucleotides of interest can be introduced into the host cell by any of a number of appropriate means, including electroporation, direct injection, transfection employing calcium chloride, rubidium chloride, calcium phosphate, DEAE-dextran, or other substances; microprojectile bombardment; lipofection; and infection (where the vector is an infectious agent, such as a virus). The choice of means of introducing vectors or polynucleotides encoding polypeptides involved in olfactory sensation will often depend on the host cell, as will be well known to those of skill in the art.

Host cells transformed with polynucleotides encoding polypeptides involved in olfactory sensation

Another embodiment of this invention are host cells transformed with (i.e., comprising) polynucleotides encoding polypeptides involved in olfactory sensation, and/or vectors having polynucleotide(s) sequences encoding polypeptides involved in olfactory sensation, as described above. Both prokaryotic and eukaryotic host cells may be used. Prokaryotic hosts include bacterial cells, for example *E. coli*, *B. subtilis*, and mycobacteria. Among eukaryotic hosts are yeast, insect, avian, plant and mammalian cells. Host systems are known in the art and need not be described in detail herein.

The host cells of this invention can be used, *inter alia*, as repositories of polynucleotides encoding polypeptides involved in olfactory sensation, and/or vehicles for

production of polynucleotides encoding polypeptides involved in olfactory sensation, and/or polypeptides involved in olfactory sensation . They may also be used as vehicles for *in vivo* delivery of polypeptides involved in olfactory sensation .

5 ***Uses for and methods using polynucleotides encoding polypeptides involved in olfactory sensation***

To determine whether a vector containing polynucleotides is capable of expressing in eukaryotic cells, cells such as, for example, COS-7 (primate origin), CHO (rodent origin), HEK-293 (human origin), or HeLa (human origin) cells can be transfected with the vector.

- 10 Expression of a polypeptide(s) encoded by the vector is then determined by, for example, RIA, ELISA, immunofluorescence of fixed cells, or western blotting of cell lysate using an antibody as a probe. Antibodies can be obtained using, as immunogen, peptide sequences synthesized from the protein sequences encoded by the known polynucleotide sequence. Polypeptides can be purified by, for example, phase partitioning, affinity methods, gel filtration and ion
- 15 exchange, as well as additional methods known by those skilled in the art. Further characterization of the expressed polypeptide can be achieved by purification of the polypeptide using techniques known in the art.

Polypeptides involved in olfactory sensation

- 20 The present invention encompasses polypeptides involved in olfactory sensation. Expression of said polypeptides is localized in the olfactory neurons located in the olfactory epithelium, as described earlier. The polypeptides may comprise any novel sequence encoded by a nucleotide sequence as depicted in SEQ ID NO:1 through SEQ ID NO:73 and SEQ ID NO:111 through SEQ ID NO:152.

- 25 The invention includes modifications to polypeptides involved in olfactory sensation including functionally equivalent fragments of the polypeptides involved in olfactory sensation which do not significantly affect their properties and variants which may have enhanced or decreased activity. Collectively, these modifications may be termed "analogs" of or a fragment of polypeptides involved in olfactory sensation. Modification of polypeptides is routine practice in
- 30 the art and need not be described in detail herein. Examples of modified polypeptides include polypeptides with conservative substitutions of amino acid residues, one or more deletions or additions of amino acids which do not significantly deleteriously change the functional activity, or use of chemical analogs. Amino acid residues which can be conservatively substituted for

one another include but are not limited to: glycine/alanine; valine/isoleucine/leucine; asparagine/glutamine; aspartic acid/glutamic acid; serine/threonine; lysine/arginine; and phenylalanine/tyrosine. Such conservative substitutions are known in the art, and preferably, the amino acid substitutions would be such that the substituted amino acid would possess
5 similar chemical properties as that of the original amino acid. These polypeptides also include glycosylated and non-glycosylated polypeptides, as well as polypeptides with other post-translational modifications, such as, for example, glycosylation with different sugars, acetylation, and phosphorylation. Amino acid modifications can range from changing or modifying one or more amino acids to complete redesign of a region. Other methods of
10 modification include using coupling techniques known in the art, including, but not limited to, enzymatic means, oxidative substitution and chelation. Modified polypeptides involved in olfactory sensation are made using established procedures in the art.

The invention also encompasses fusion proteins comprising one or more polypeptides involved in olfactory sensation. For purposes of this invention, an fusion protein contains one
15 or more polypeptides involved in olfactory sensation and another amino acid sequence to which it is not attached in the native molecule, for example, a heterologous sequence or a homologous sequence from another region. Useful heterologous sequences include, but are not limited to, sequences that provide for secretion from a host cell, intracellular trafficking, and stability/degradation. Other useful heterologous sequences are ones which facilitate
20 purification. Examples of such sequences are known in the art and include those encoding epitopes such as Myc, HA (derived from influenza virus hemagglutinin), His-6, or FLAG. Other heterologous sequences that facilitate purification are derived from proteins such as glutathione S-transferase (GST), maltose-binding protein (MBP), or the Fc portion of immunoglobulin.

Preparation of polypeptides involved in olfactory sensation

The polypeptides of this invention can be made by procedures known in the art. The polypeptides can be produced by recombinant methods (i.e., single or fusion polypeptides) or by chemical synthesis. Polypeptides, especially shorter polypeptides up to about 50 amino
30 acids, are conveniently made by chemical synthesis. Methods of chemical synthesis are known in the art and are commercially available. For example, a polypeptide can be produced by an automated polypeptide synthesizer employing the solid phase method. Polypeptides can also be made by chemical synthesis using techniques known in the art.

Polypeptides can also be made by expression systems, using recombinant methods. The availability of polynucleotides encoding polypeptides permits the construction of expression vectors encoding intact (i.e., native) polypeptide, functional equivalents and functional fragments thereof, modified forms or recombinant forms. A polynucleotide
5 encoding the desired polypeptide, or a fusion protein, can be ligated into an expression vector suitable for any convenient host. Both eukaryotic and prokaryotic host systems can be used. The polypeptide is then isolated from lysed cells or from the culture medium and purified to the extent needed for its intended use. Purification or isolation of the polypeptides expressed in
10 host systems can be accomplished by any method known in the art (e.g. partitioning exclusion, ion exchange chromatograph, gel filtration, etc.). Other controlling transcription or translation segments, such as signal sequences that direct the polypeptide to a specific cell compartment (i.e., for secretion), can also be used. Examples of prokaryotic host cells are known in the art and include, for example, *E. coli* and *B. subtilis*. Examples of eukaryotic host cells are known in the art and include yeast, avian, insect, plant, and animal cells such as COS7, HeLa, CHO,
15 HEK-293 and other mammalian cells.

Alternatively, in vitro expression systems may also be used to produce polypeptides involved in olfactory sensation. A plasmid containing a polynucleotide encoding polypeptides involved in olfactory sensation, under the control of an appropriate promoter, can be transcribed and the resultant RNA translated in vitro through the use of commercially
20 available reagents. Such methods can be used to produce relatively pure samples of the polypeptide and are known in the art.

Preferably, the polypeptides are at least partially purified from other cellular constituents. In one embodiment, the polypeptides are at least 70%, more preferably at least 80%, even more preferably at least 90% or most preferably at least 95% pure. In this context,
25 purity can be calculated as a weight percent of the total protein content of the preparation. More highly purified polypeptides may also be obtained and are encompassed by the present invention. Methods of protein purification are known in the art and are not described in detail herein. For membrane-bound proteins, the lipid content of the preparation, which is required to maintain the structure and function of the protein, is excluded from the purity calculation. That
30 is, if a preparation weighing 10 mg has 5 mg lipid, 4 mg of desired protein, and 1 mg of undesired proteins, the purity is calculated as 80% (desired protein content divided by total protein content). Preparations of biological or synthetic molecules suitable for maintaining structure and function of membrane proteins are described in Etemadi AH (1985) *Adv Lipid*

- Res 1985;21:281-428; Villalobo A (1990) *Biochimica Et Biophysica Acta*, 1017(1):1-48; Montal M (1987) *Journal Of Membrane Biology* 98(2): 101-115; Scotto AW et al. (1987) *Biochemistry* 26(3): 833-839; Jain MK and Zakim D (1987) *Biochimica Et Biophysica Acta* 906(1): 33-68; Czerski L and Sanders CR (2000) *Anal Biochem* 284(2):327-33 (lipid-
 5 detergent mixtures or "bicelles"); Hrafnisdottir S and Menon AK (2000) *J Bacteriol* 182(15):4198-206 (proteoliposomes); Puu G et al. (2000) *Biosens Bioelectron* 15(1-2):31-41 (protein-lipid preparations on solid surfaces); Schafmeister CE et al. (1993) *Science* 262(5134):734-8 ("peptitergents").

10 *Uses of polypeptides involved in olfactory sensation*

- The polypeptides of this invention have a variety of uses. They can be used, for example, to screen odorant ligands in order to determine the scent representations, scent profiles or scent fingerprints of particular odorant molecules and further to characterize the effect of functional groups and chemical characteristics on perceived smell. Methods for screening odorant
 15 compounds using odorant receptors in neuronal cells are known in the art (Firestein et al., WO 98/50081; Duchamp-Viret et al., *Science* 1999, 284 2171-2174; Sato et al., *J. Neurophys.* 1994 72 2980-2989; Malnic et al, *Cell* 1999 96 713-723; Zhao et al., *Science* 1998 279, 237-242). There are also methods which can be employed to screen odorant compounds which do not require neuronal cells and are known in the art (Kauvar et al., U. S. Pat. No. 5,798,275; Kiefer et al.,
 20 *Biochemistry* 1996 35 16077-16084; Krautwurst et al., *Cell* 1998 95 917-926),

- Analysis of the scent can be performed in a number of ways. Various embodiments of the scent analysis system are presented. Examples of how these embodiments might operate are also presented, although it should be emphasized that the invention is not limited by any
 25 particular theory of olfactory perception or scent analysis.

Olfactory Space

- The sensory subsystem comprises a series of olfactory receptors, which selectively bind with the chemical component(s) making up the scent. The scent can be characterized in terms
 30 of which of the approximately 1,000 olfactory receptors the scent component(s) bind to, and the strength of the interaction of the component(s) with those receptors. Each olfactory receptor can be considered an orthogonal basis vector; the entire set of olfactory receptors can be considered a set of basis vectors spanning "olfactory space." This is analogous to vectors

pointing along the x, y, and z directions in three-dimensional space, where any point in space can be represented by a combination of the x, y, and z basis vectors (with each of the x, y, and z vectors multiplied by the appropriate scalar quantity). The intensity of interaction of a scent with an olfactory receptor determines the magnitude of the vector along that particular "axis" in olfactory space. Thus, every scent can be uniquely described by a vector representation in olfactory space.

A representation of a scent in such a manner that the scent can later be re-created is defined as scent profiling. The aforementioned vector representation is one example of a scent profile.

Primary Scents

For the purposes of this invention, a receptor primary scent component is defined as a chemical that interacts with one and only one scent receptor. A receptor complex scent component is defined as a chemical that interacts with more than one scent receptor; the receptor complex scent component can interact with each of the scent receptors to different degrees, to equal degrees, or can interact with some receptors to the same degree and others to different degrees.

Olfactory receptors are proteins which fall in the class of seven transmembrane domain G protein-coupled receptors, and are found in olfactory neurons *in vivo*. Binding of an odorant to an olfactory receptor causes second messenger systems to become activated or inhibited in the cell, leading to increased cellular production of second messenger molecules such as cyclic AMP. These second messenger systems in turn lead to the depolarization of the olfactory neuron, or other changes in the state of the neuron, which provides the signal to the nervous system that the odorant has been detected.

With a complete set of receptor primary scent components, any scent can be re-created with the knowledge to the degree to which it interacts with each olfactory receptor. The instant invention encompasses such complete sets of receptor primary scent components. Other embodiments of the invention encompass sets of receptor primary scent component chemicals which provide the ability to re-create a particularly desired subset of scents, but not necessarily all possible scents. Still more embodiments encompass sets of receptor primary scent component chemicals which provide the ability to approximate particular scents, while not necessarily exactly re-creating the interaction profile of the particular scents.

In some cases, a receptor complex scent will be an acceptable approximation to a receptor primary scent. That is, if a given receptor complex scent interacts with a first scent receptor strongly, but interacts with other scent receptors less strongly, it can be considered an approximation to a receptor primary scent component for the first receptor. Such a receptor complex scent component is described by the term receptor quasi-primary scent component. One embodiment of the invention encompasses sets of receptor quasi-primary scent component chemicals suitable for re-creating all scents. Another embodiment of the invention encompasses sets of receptor quasi-primary scent component chemicals suitable for re-creating a particularly desired subset of scents, but not necessarily all possible scents. Yet another embodiment encompasses sets of receptor quasi-primary scent component chemicals which provide the ability to approximate particular scents, while not necessarily exactly re-creating the interaction profile of the particular scents.

The identification of receptor primary or quasi-primary scent component chemicals provides the most conceptually straightforward method of re-creating scents. However, another embodiment of the invention encompasses the use of receptor complex scent components for re-creating scents. An example of such an embodiment would be re-creation of a scent that activates olfactory receptors designated OR1, OR2, OR3, OR4, OR5 and OR6 (for the sake of illustration, it is assumed that the olfactory receptors are stimulated to an equal extent). If one is in possession of two receptor complex scent component chemicals (RCSC's) where RCSC1 activates OR1 and OR5, and RCSC2 activates OR2, OR3, OR4, and OR6, then one can reproduce the original scent by mixing RCSC1 and RCSC2 to re-create the original olfactory receptor activation profile. In practice, the profiles of various receptor complex scent components will be much more complicated than the forgoing example, and components which inhibit olfactory activation as well as stimulate activation can be included in the sets. However, once receptor activation profiles of sufficient receptor complex scent components are known, computer algorithms can be utilized to create the appropriate combination of receptor complex scent components. Using vector representations of the olfactory receptor activation profiles for a set of receptor complex scent components, one can create linear combinations of such receptor complex scent components in order to represent a particular scent. For the example given above, such a vector representation would look like (1, 0, 0, 0, 1, 0) for the first receptor complex scent component and (0, 1, 1, 1, 0, 1) for the second receptor

complex scent component, while the vector representation of the scent to be re-created is (1, 1, 1, 1, 1, 1). If x_1 and x_2 are the relative proportions of the first receptor complex scent component and the second receptor complex scent component, respectively, to be combined to re-create the scent, then the problem can be represented as a series of linear equations:

$$\begin{array}{rclcl} 1x_1 & + & 0x_2 & = & 1 \\ 0x_1 & + & 1x_2 & = & 1 \\ 0x_1 & + & 1x_2 & = & 1 \\ 0x_1 & + & 1x_2 & = & 1 \\ 1x_1 & + & 0x_2 & = & 1 \\ 0x_1 & + & 1x_2 & = & 1 \end{array}$$

and the solutions for x_1 and x_2 are $x_1 = 1$, $x_2 = 1$. Solutions to systems of linear equations have been thoroughly studied and many algorithms are available for implementation on computers, including algorithms which evaluate the accuracy of an approximate solution when an exact solution cannot be determined. (See, e.g., Dettman, J.W., *Introduction to Linear Algebra and Differential Equations*, Dover Pubs., 1986; Press W.H. et al., *Numerical Recipes in C: The Art of Scientific Computing*, 2nd ed., Cambridge University Press, 1993; Vetterling (ed.) *Numerical Recipes in C: The Art of Scientific Computing/Disk V 2.02*, Cambridge University Press, 1997.) These methods can also be used to determine whether a set of receptor complex scent components is suitable for re-creating a given scent. For example, if the scent to be recreated is represented by the vector (1, 1, 1, 1, 1, 2), there will be no solution to the resulting system of linear equations using the two receptor complex scent components in the illustration above. In this instance, one or more additional receptor scent components will need to be identified in order to be able to re-create the scent in terms of the receptor primary scent components. Alternatively, the scent represented by (1, 1, 1, 1, 1, 1) may be an acceptable approximation to the scent represented by (1, 1, 1, 1, 1, 2). Integers are used in this example for clarity, but the vectors can contain any real number representing a measured intensity; for example, (1.1, 0.997, 1.08, 1.2, 0.88888..., 2.00001) may be an acceptable approximation to the scent represented by (1, 1, 1, 1, 1, 2).

It will be readily appreciated that the choice of a complete set of receptor primary, quasi-primary, or complex scent component chemicals (capable of generating all scents) versus a partial set of receptor primary, quasi-primary, or complex scent component chemicals (capable of generating, exactly or approximately, a subset of scents) depends on the application for which scent re-creation is desired.

A special category of receptor scent components are chemicals which bind to a receptor without activating it. If these non-activating chemicals prevent chemicals which do activate the receptors from binding, the non-activating chemicals act to "turn off" those receptors. These non-activating chemicals, or receptor binding antagonists, are particularly useful in editing scents, as they can be added to a scent to attenuate or eliminate particular aspects of the scent. In the vector example above, if a particular receptor antagonist blocks OR2, OR3, and OR4, but not OR1, OR5 or OR6, then it can be represented in vector format as (0, -1, -1, -1, 0, 0). In the reproduction of (1, 1, 1, 1, 1, 2) from the vectors (1, 0, 0, 0, 1, 0) and (0, 1, 1, 1, 0, 1), the following combination can be used:

$1 \times (1, 0, 0, 0, 1, 0) + 2 \times (0, 1, 1, 1, 0, 1) + 1 \times (0, -1, -1, -1, 0, 0)$ to yield the vector (1, 1, 1, 1, 1, 2). In some instances, enough of a particular receptor binding antagonist is used to eliminate any possibility of activation by a receptor scent component, in which case the vector entry for the receptor(s) which are blocked by that antagonist contains 0 in the vector position corresponding to that receptor(s).

Perceptive primary scents are defined as scents that give a single scent perception, for example, the scent "lemon" as perceived by a human. A perceptive primary scent can be composed of one or more receptor primary scent components, one or more receptor complex scent components, or a mixture of one or more receptor primary scent components and one or more receptor complex scent components. Since perceptive primary scents are to some extent subjective, identification of perceptive primary scents can be performed by using a panel of subjects who evaluate and describe scents. A perceptive complex scent is made up of more than one perceptive primary scent. The boundaries between a perceptive primary scent and a perceptive complex scent are also to some extent subjective; for example, one person may describe a scent as "pizza," while another person may describe the same scent as "sausage, cheese and tomato sauce." That is, one person may perceive a scent as a perceptive primary scent for "pizza," while another person may perceive the same scent as a perceptive complex scent made up of several individual perceptive primary scents. In order to standardize perceptive scents, a panel of five or more, preferably ten or more, more preferably fifty or

more, still more preferably one hundred or more, people can be surveyed to label various perceptive scents. When a plurality, preferably a majority, more preferably 66 2/3 % or greater, still more preferably 95 % or greater, even more preferably 99% or greater, of the panel identifies a scent as the same scent (e.g., of a panel of 100 people, 95 describe a scent as
5 "pizza," while the other 5 describe the scent otherwise), the scent can be labeled as a perceptive scent (the perceptive scent can be primary or complex, depending on whether the panel identifies it as a single scent or a mixture of scents).

In fields where existing classification schemes already exist, the perceptive primary and complex scents can be indexed according to those schemes. For example, the SFP (Société
10 Française des Parfumeurs) has drawn up a classification system based on 5 main groups, subdivided into classes. Such a classification can be used for selecting perceptive primary scents and used as guides for combining the scents.

Selecting Chemicals for Scent Re-creation

15 A scent which has been represented as a set of basis vectors in olfactory space can in principle be re-created simply by mixing the receptor primary scent components, receptor quasi-primary scent components, or receptor complex scent components needed to interact the olfactory receptors in the same pattern as the original scent. Such an approach requires 1) a method to generate a representation of the original scent in olfactory space, and 2) suitable
20 receptor primary scent component chemicals which can be mixed in the appropriate manner.

Identification of receptor scent components can be performed by various methods. One such method assays the interaction of candidate components with each olfactory receptor. The receptors can be expressed *in vitro* and assays can be set up to monitor the interaction of various candidate components with each individual receptor. Chemicals which interact with
25 one and only one olfactory receptor are receptor primary scent components, while chemicals which interact with more than one olfactory receptor are receptor complex scent components (and can possibly be receptor quasi-primary scent components, depending on the interaction profile it displays with the olfactory receptors). Such an approach can use methods known in the art, for example those of Breer *et al.*, Ann. N. Y. Acad. Sci. (1998) 855:175-81 or Malnic *et al.*,
30 *Cell* (1999) 96(5):713-23. Breer *et al.* expressed olfactory receptors in Sf9 cells and evaluated the second-messenger response to various odorants. Malnic *et al.* isolated olfactory neurons from mice and utilized calcium imaging to study the response of the neurons to different odorants, while using RT-PCR to determine which olfactory receptor was expressed

in the neuron under study. U.S. Patent No. 5,798,275 describes a method for evaluating interaction of compounds with members of a reference panel of proteins. WO 98/50081 discloses methods for detecting particular odorant ligand specificity for particular odorant receptors in nasal epithelium tissue of mammals such as rats and mice.

5

Selection of Receptor Primary Scents by in silico Methods

An alternative method utilizes *in silico* screening techniques--that is, computer simulation methods--for selecting candidate components. Protein-ligand screening can be used to select compounds which bind to particular receptors in order to identify receptor primary
10 scent components. Examples of such programs are DOCK, AutoDock, GOLD, FlexX, LUDI, GROWMOL, and HOOK. (See Wang, J., Kollman, P.A., Kuntz I.D., "Flexible ligand docking: a multistep strategy approach," *Proteins* 36(1):1-19 (1999) and references therein.) These programs function by taking a protein structure and either matching compounds of known structure to the protein structure to determine the protein-ligand interaction, or by
15 "growing" a molecule in the active site or binding site of a protein to determine what molecule will best interact with the protein.

Olfactory receptor proteins are membrane proteins, and experimental determination of the three-dimensional structures of membrane proteins has lagged the corresponding structural determination of water-soluble proteins for various reasons. However, alternative methods for
20 constructing the three-dimensional structures of proteins are available. The primary (amino acid) sequences of many olfactory receptors are known. This information can be used to model a three-dimensional structure of a receptor protein using various algorithms and computer programs known in the art. The resulting model structure can then be used as the basis for evaluating interaction of candidate components with the receptor.

25 Alternatively, given known chemical structures which give rise to a particular odor, analysis of the structures can indicate the particular portion of the chemical structure which is responsible for the odor. This is analogous to "pharmacore analysis" used in medicinal chemistry to determine the important portion of drugs.

Methods for developing compounds which bind to receptors and other proteins of
30 known structure, and determining interactions between ligands and receptors, are described in various references. The DOCK program evaluates the fit of a ligand into a protein molecule of known structure (see Gschwend, D.A., Good, A.C. and Kuntz, I.D., "Molecular Docking Towards Drug Discovery", *J. Mol. Recognition* 9, 175-86 (1996); Kuntz, I.D., Meng, E.C., and

B.K. Shoichet, "Structure-Based Strategies For Drug Design and Discovery", *Acc. Chem. Res.* 27, 117-123 (1994); and Kuntz, I.D., "Structure-based strategies for drug design and discovery", *Science* 257, 1078-1082 (1992); see also

<http://www.cmp Pharm.ucsf.edu/kuntz/dock.html>). Using a known (or modeled) structure of an

5 olfactory receptor, DOCK can be used to screen for compounds which bind to the receptor.

The program AMBER (see Cornell, WD, Cieplak P, Bayly CI, Gould IR, Merz KM Jr, Ferguson DM, Spellmeyer DC, Fox T, Caldwell JW and Kollman PA. "A second generation force field for the simulation of proteins and nucleic acids," *Journal of the American Chemical Society* 117, 5179-5197 (1995); Computer Simulation of Biomolecular Systems, A. Wilkinson,

10 P. Weiner, W. Van Gunsteren, eds. Volume 3, p. 83-96, P. Kollman, R. Dixon, W. Cornell, T. Fox, C. Chipot and A. Pohorille; Bayly CI, Cieplak P, Cornell WD and Kollman PA. "A well-behaved electrostatic potential based method using charge restraints for deriving atomic charges - the RESP model," *Journal of Physical Chemistry* 97(40), 10269-10280 (1993);

Cornell WD, Cieplak P, Bayly CI and Kollman PA. "Application of RESP charges to calculate
15 conformational energies, hydrogen bond energies, and free energies of solvation," *Journal of the American Chemical Society* 115(21), 9620-9631 (1993); see also

<http://www.amber.ucsf.edu/amber/amber.html>) can be used to calculate more precise interaction energies between candidate ligands. Other examples of such methods are described in, for example, U.S. Patent No. 5,866,343, directed to determining the energetically favorable
20 binding site between two molecules; U.S. Patent No. 5,854,992, a system and method for structure-based drug design which takes into account binding free energy as it "grows" candidate molecules into a receptor binding site; and U.S. Patent No. 5,495,423, which describes a method for ligand design (principally applicable to peptidic ligands).

The foregoing methods typically depend on a known three-dimensional structure for the
25 receptor. When such a structure cannot or has not been determined experimentally, a structure can be modeled using computer algorithms. Blundell TL, Sibanda BL, Sternberg MJ, Thornton JM, "Knowledge-based prediction of protein structures and the design of novel molecules," *Nature* 326(6111):347-52 (1987); Shortle D, "Structure prediction: The state of the art," *Curr Biol* 9(6):R205-9 (1999), Morea V, Leplae R, Tramontano A, "Protein structure prediction and
30 design," *Biotechnol Annu Rev* 4:177-214 (1998) and Onuchic JN, Luthey-Schulten Z, Wolynes PG, "Theory of protein folding: the energy landscape perspective," *Annu Rev Phys Chem* 48:545-600 (1997) address various methods of predicting protein structure from sequence data.

Various implementations for predicting protein structure from amino acid sequences are discussed in U.S. Patent Nos. 5,878,373 and 5,884,230.

If the structure, or even the identity, of the targeted receptor cannot be determined, alternative computational techniques can be used to generate information regarding possible
5 ligands which will interact with the receptor. Quantitative structure-activity relationships (QSAR; see Green, S.M. and Marshall, G.R., "3-D QSAR: A current perspective," Trends Pharmacol Sci 16:285 (1995); and 3D QSAR in Drug Design: Theory, Methods and Applications, Kubinyi, H. Ed.; Escom, Leiden.), including QSAR refinements such as comparative molecular field analysis (ComFA) (Cramer, R. D. et al. "Comparative Molecular
10 Field Analysis ComFA 1. Effect Of Shape On Binding Of Steroids To Carrier Proteins," *J. Am. Chem. Soc.* 110: 5959 (1988)); and pharmacophore mapping (Martin YC, Bures MG, Danaher EA, DeLazzer J, Lico I, Pavlik PA, "A fast new approach to pharmacophore mapping and its application to dopaminergic and benzodiazepine agonists," *J Comput Aided Mol Des* 7(1):83-102 (1993)) have been used to design pharmacophores that can interact with the receptor. U.S.
15 Patent No. 5,699,268 provides a method for producing computer-simulated receptors which functionally mimic biological receptors; the simulated receptors are essentially abstractions of structurally useful information from compounds which are known to interact with a receptor. U.S. Patent No. 5,901,069 describes a method of automatically refining a set of chemicals using structure/activity data. U.S. Patent No. 5,862,514 describes a method of simulating
20 synthesis of compounds of desired biological activity and evaluating their activity via further simulations.

Application of structure-function relationships to classification of odors has been described by Chastrette M., Rallet E. "Structure-minty odour relationships: Suggestion of an interaction pattern," *Flavour and Fragrance Journal*, 13(1):5-18 (1998); Chastrette M., De
25 Saint Laumer J.Y., Peyraud J.F., "Adapting the structure of a neural network to extract chemical information. Application to structure-odour relationships," *SAR QSAR Environ Res* 1 (2-3):221-231 (1993), Chastrette M., "Trends in structure-odor relationships," *SAR QSAR Environ Res* 6(3-4):215-254 (1997) and Jain et al., "A shape-based machine learning tool for drug design," *J Comput Aided Mol Des* 8(6):635-652 (1994). These methods can be useful in
30 determining the "chemical distance" between odors. For example, isoamyl acetate is typically experienced as a banana-like odor, while octyl acetate is typically experienced as an orange-like odor, which gives a measure of how the chain length of the alkoxy portion of the ester influences perception.

Olfactory Receptors and Libraries of Olfactory Receptors

The olfactory receptors of the invention can be used to analyze and describe the interaction of scent odorant molecules with each receptor. This can be done individually, receptor-by-receptor and odorant molecule by odorant molecule. However, a combinatorial approach provides a much more powerful method of analyzing and describing the interaction of scent odorant molecules with olfactory receptors.

In one embodiment, the invention comprises libraries of olfactory receptors. These libraries are used to screen compositions for interaction with receptors. A composition can be a single compound (essentially a pure chemical), or a mixture of two or more compounds or chemicals. The compositions can be presented to the library in vapor form, or in solutions, typically aqueous solutions.

The method for determining the binding pattern of a composition with olfactory receptors comprises the steps of: exposing the composition to an olfactory receptor library; and determining whether the composition binds to each olfactory receptor of the library, thereby determining the overall binding pattern of the composition. While it is desirable to determine whether the composition binds to each of the olfactory receptors, in certain cases, determining the binding pattern to a subset of the receptors is suitable. Such a situation can arise if the complete pattern is not needed, or if the experiment cannot determine binding to a receptor for a particular reason. (Determining the binding to a subset is equivalent to reducing the olfactory receptor library to that subset of receptors.)

Typically, the libraries are prepared as arrays, where the position of each olfactory receptor is known on the array. The arrays can take the form of multiwell plates, solid substrates such as chips or wafers, or any other form allowing identification of the receptor location. The arrays can be prepared in order to simply assess binding, or can be prepared in order to assess degree of activation as described above, using, for example, the technique of Malnic *et al.*, *Cell* 1999 96, 713-723. Alternatively, an *in silico* array of structures can be prepared, using the known primary structure of the receptors and the modeling techniques described above.

The libraries contain at least two olfactory receptors. In increasing order of preference, the libraries contain at least 5, 10, 20, 30, 40, 50, 75, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 1200, 1400, 1500, 1600, 1800, or 2000 olfactory receptors. The

receptors are presented as ordered arrays. For example, a 96-well plate can contain 96 receptor preparations. Upon exposure to a composition, the plate can be scanned, and the response of each receptor in each well can be evaluated. This leads to a 96-element vector description of the composition in terms of those 96 olfactory receptors.

5 In one embodiment, binding to the olfactory receptors is assessed. In another embodiment, the approximate binding constant of the composition to the olfactory receptors is determined. In yet another embodiment, the degree of activation of the olfactory receptor by the composition is determined. For receptor antagonists, binding will occur, but no activation will occur; the invention embraces the identification of such
10 antagonists.

 The compositions for use are varied. A set of all volatile compounds can be used. A standard set of perfumes or odorants can be used. A set of commercially used scents can be used. Sets of compounds particularly useful in the invention are disclosed in co-pending United States Patent Application Serial No. 09/620,753. However, it must be emphasized
15 that the invention is not limited to any one set or classification of compounds.

 Preferred subsets of olfactory receptor polynucleotide sequences include:

SEQ ID NOS: 163, 331, 414, 425, 672, 762, 919, and 1027;

SEQ ID NOS: 809 and 1067;

SEQ ID NO: 744;

20 SEQ ID NOS: 207, 336, 441, and 615;

SEQ ID NOS: 157, 168, 197, 221, 250, 334, 340, 412, 413, 459, 491, 618, 690, 694, 759, 760, 761, 767, 819, 860, 872, 873, 917, 936, 939, 940, 947, 952, 958, 959, 1023, 1034, 1038, 1043, and 1044;

SEQ ID NOS: 783, 785, 882, 888, 922, and 925;

25 SEQ ID NOS: 707, 748, 752, 755, 756, 790, and 997;

SEQ ID NOS: 1065, 1066, 1067, 1068, 1069, 1070, 1071, 1072, 1073, 1074, 1075, 1076, 1077, 1078, 1079, 1080, 1081, 1082, 1083, and 1084;

SEQ ID NOS: 163, 239, 331, 335, 368, 381, 385, 414, 425, 514, 572, 596, 603, 628, 638, 642, 672, 674, 689, 744, 762, 809, 835, 885, 896, 919, 920, 938, 948, 972, 999,
30 1007, 1014, and 1027;

SEQ ID NOS: 164, 173, 176, 180, 182, 184, 185, 188, 190, 194, 207, 210, 213, 214, 215, 217, 219, 220, 223, 226, 227, 229, 230, 234, 235, 240, 249, 255, 265, 270, 273, 274,

276, 277, 279, 281, 289, 291, 293, 294, 298, 302, 307, 311, 318, 319, 321, 330, 336, 339,
341, 342, 343, 348, 351, 356, 359, 361, 365, 366, 367, 368, 370, 372, 373, 374, 375, 376,
378, 379, 380, 382, 383, 384, 385, 388, 391, 392, 393, 398, 400, 401, 403, 408, 420, 423,
427, 428, 431, 434, 435, 438, 439, 440, 441, 447, 448, 450, 455, 458, 464, 465, 468, 471,
5 473, 474, 475, 478, 479, 481, 482, 484, 485, 492, 494, 499, 502, 508, 511, 512, 513, 515,
526, 532, 534, 541, 543, 545, 546, 550, 552, 553, 557, 558, 560, 563, 564, 568, 572, 576,
582, 583, 584, 585, 586, 588, 599, 600, 605, 606, 607, 608, 609, 610, 615, 620, 621, 631,
632, 636, 638, 640, 642, 645, 648, 650, 651, 652, 654, 656, 657, 661, 662, 664, 668, 679,
680, 686, 687, 689, 691, 696, 699, 700, 702, 706, 713, 720, 721, 723, 729, 734, 738, 745,
10 768, 772, 773, 775, 791, 798, 799, 823, 857, 898, 900, 901, 903, 914, 931, 933, 937, 941,
945, 948, 956, 965, 969, 983, 992, 993, 994, 999, 1003, 1005, 1009, 1010, 1011, 1019,
1028, 1035, 1037, 1052, 1061, 1062, and 1063

SEQ ID NOS: 157, 161, 163, 168, 197, 200, 205, 218, 221, 242, 250, 331, 334,
340, 412, 413, 414, 419, 425, 452, 453, 454, 456, 459, 462, 491, 591, 618, 622, 663, 665,
15 667, 670, 672, 690, 694, 695, 709, 759, 760, 761, 762, 767, 819, 820, 822, 826, 832, 846,
847, 860, 872, 873, 877, 881, 887, 908, 911, 913, 917, 919, 921, 936, 939, 940, 942, 944,
947, 951, 952, 955, 958, 959, 960, 964, 975, 977, 979, 986, 1023, 1027, 1034, 1038, 1043,
1044, 1049, and 1051;

SEQ ID NOS: 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 164, 165, 166,
20 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184,
185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202,
203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220,
221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238,
240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257,
25 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275,
276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293,
294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311,
312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329,
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591, 592, 593, 594, 595, 597, 598, 599, 600, 601, 602, 604, 605, 606, 607, 608, 609, 610,
611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 629,
630, 631, 632, 633, 634, 635, 636, 637, 639, 640, 641, 643, 644, 645, 646, 647, 648, 649,
650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667,
15 668, 669, 670, 671, 673, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687,
688, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706,
707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724,
725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742,
743, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761,
20 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780,
781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798,
799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 810, 811, 812, 813, 814, 815, 816, 817,
818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 836,
837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854,
25 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872,
873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 886, 887, 888, 889, 890, 891,
892, 893, 894, 895, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910,
911, 912, 913, 914, 915, 916, 917, 918, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930,
931, 932, 933, 934, 935, 936, 937, 939, 940, 941, 942, 943, 944, 945, 946, 947, 949, 950,
30 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968,
969, 970, 971, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987,
988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 1000, 1001, 1002, 1003, 1004, 1005,

1006, 1008, 1009, 1010, 1011, 1012, 1013, 1015, 1016, 1017, 1018, 1019, 1020, 1021,
1022, 1023, 1024, 1025, 1026, 1028, 1029, 1030, 1031, 1032, 1033, 1034, 1035, 1036,
1037, 1038, 1039, 1040, 1041, 1042, 1043, 1044, 1045, 1046, 1047, 1048, 1049, 1050,
1051, 1052, 1053, 1054, 1055, 1056, 1057, 1058, 1059, 1060, 1061, 1062, 1063, and 1064;

5 and any and all combinations of the foregoing sets.

The polypeptide translation products of those polynucleotide sequences form sets of preferred olfactory receptor polypeptides, as well as any and all combinations of those polypeptide sets. The preferred sets of polypeptide translation products, and any and all combinations thereof, are also preferred sets for use as libraries of olfactory receptors for
10 scent analysis.

Scent Fingerprinting

It will be appreciated that in many instances, analysis of a scent (whether in terms of
15 receptor primary scent components, receptor quasi-primary scent components, receptor complex scent components, or other scent representations) is of great utility in and of itself, in addition to the utility of that analysis in scent re-creation. Thus, another embodiment of the invention encompasses "scent fingerprinting," which comprises analysis of a scent profile when re-creation of that scent may not be necessary or desirable. The distinction between scent
20 profiling, as defined above, and scent fingerprinting, as defined here, is that scent profiling is a representation of a scent relative to a mammalian olfactory system in such a manner as to provide useful information about the interaction of the scent with that olfactory system, such as sufficient information to enable re-creation of the scent from receptor primary scent components. In contrast, scent fingerprinting can, but does not necessarily, provide such
25 information.

Various applications and examples of scent fingerprinting can include, but are not limited to, the following illustrative situations. Natural gas is widely used as a heating and fuel supply, but is in itself odorless. Utility companies routinely add small amounts of odorants such as mercaptans to allow detection of natural gas leaks in households. Should a leak occur
30 at an unattended site, however, potentially dangerous quantities of natural gas can accumulate. In such areas, a device which can recognize odorants would be useful.

Another use of scent fingerprinting is quality control of a manufacturing process. Many food items, such as freshly-baked bread and pastries, sauces, and cheeses, have distinct

odors. A manufacturer can record a scent fingerprint for a given food item, e.g. spaghetti sauce for packaging in jars. The quality of the product can then be monitored at various stages in manufacture and storage, and deviations from the established scent fingerprint can be used to alert the manufacturer to problems in manufacture or storage. Quality control scent fingerprints are not limited to food items, but can be used in any circumstance where a volatile component of an item of manufacture can be used as a quality control indicator, e.g., perfume, deodorants, solvent mixtures, etc.

While scent fingerprints need not be meaningful in terms of a mammalian olfactory system, it will be readily appreciated that a scent profile, which does represent a scent in a manner relevant to an olfactory system, is a special type of scent fingerprint. Additionally, the response of a device which yields a scent fingerprint of an odor (such as the "artificial nose" described in U.S. Pat. Nos. 5,571,401, 5,698,089, 5,788,833, 5,891,398 and 5,911,872) can be calibrated against the response of a mammalian olfactory system in order to transform the scent fingerprint generated by the device into a true scent profile which can be utilized to re-create an odor using receptor primary scent components, receptor quasi-primary scent components, or receptor complex scent components. The invention encompasses such data transformations.

Scent Editing

Representation of a scent as a scent profile provides the capability of editing the scent. A scent profile which represents a scent in terms of perceptive primary scent components is the most straightforward representation to edit. An example is the perceptive complex primary scent of "burned pizza" comprised of perceptive primary scent components of sausage, cheese, tomato sauce, and burned dough. In order to edit the scent to provide a more pleasant re-creation, the perceptive primary scent component of burned dough would simply be eliminated.

Other scent profiles can be edited using a knowledge of the perception of a particular components. Using our six-receptor example, suppose that the (1, 0, 0, 0, 1, 0) receptor complex scent component is known to provide an unpleasant aspect of the scent, while the (0, 1, 1, 1, 0, 1) component is known to provide the pleasant aspect of the scent. The first complex scent component can be omitted from the edited scent profile, leaving (0, 1, 1, 1, 0, 1) as the edited scent profile. (This would also alter the index values for scent re-creation, from 1 and 1, to 0 and 1.) More complex editing situations can be manipulated using computer algorithms as discussed above.

Individual scent components can be omitted, added, weakened, or intensified, and different scent components can be adjusted in different manners or degrees, depending on the desired result. The editing can be done interactively, with each edited scent emitted by the emitter module for evaluation by the user, or can be done automatically, with
 5 removal/weakening or addition/intensifying of particular components specified in advance, on either an absolute scale or relative to other components.

The following examples are presented to illustrate, but not to limit, the invention.

EXAMPLES

10 **Example 1: Isolation of human olfactory receptor cDNAs**

Total RNA was extracted from human olfactory epithelium and polyA⁺ RNA was obtained by oligo-dT selection. This RNA served as template for cDNA synthesis using reagents from the SMART cDNA Library construction kit (Clontech K1051-1; Palo Alto, CA). The Superscript IITM reverse transcriptase (Life Technologies, Gaithersburg, MD)
 15 was used for first-strand synthesis.

Double-stranded cDNA was passed through a Chroma-Spin⁺ STE-100 column (Clontech) to remove unreacted primers and cDNA fragments shorter than 100 nucleotides. The olfactory epithelial cDNA population was then subjected to amplification using primers homologous to conserved regions in GPCRs. The first primer set was homologous
 20 to transmembrane segment 2 (TM2) and the second set was homologous to TM 7.5. The TM2 primer set contained 32 oligonucleotides, representing all possible nucleotide sequences capable of encoding the TM2 amino acid sequence motif P-M-Y-F/L-F/Y-F/L, and designed to be non-degenerate at their 3' ends. Sequences of the TM2 primers are as follows:

25

	CCN ATG TAY TTN CTC CTA	SEQ ID NO: 74
	CCN ATG TAY TTN CTC CTC	SEQ ID NO: 75
	CCN ATG TAY TTN CTC CTG	SEQ ID NO: 76
	CCN ATG TAY TTN CTC CTT	SEQ ID NO: 77
30	CCN ATG TAY TTN CTC TTA	SEQ ID NO: 78
	CCN ATG TAY TTN CTC TTC	SEQ ID NO: 79
	CCN ATG TAY TTN CTC TTG	SEQ ID NO: 80
	CCN ATG TAY TTN CTC TTT	SEQ ID NO: 81
	CCN ATG TAY TTN CTT CTA	SEQ ID NO: 82
35	CCN ATG TAY TTN CTT CTC	SEQ ID NO: 83
	CCN ATG TAY TTN CTT CTG	SEQ ID NO: 84

	CCN ATG TAY TTN CTT CTT	SEQ ID NO: 85
	CCN ATG TAY TTN CTT TTA	SEQ ID NO: 86
	CCN ATG TAY TTN CTT TTC	SEQ ID NO: 87
	CCN ATG TAY TTN CTT TTG	SEQ ID NO: 88
5	CCN ATG TAY TTN CTT TTT	SEQ ID NO: 89
	CCN ATG TAY TTN TTC CTA	SEQ ID NO: 90
	CCN ATG TAY TTN TTC CTC	SEQ ID NO: 91
	CCN ATG TAY TTN TTC CTG	SEQ ID NO: 92
	CCN ATG TAY TTN TTC CTT	SEQ ID NO: 93
10	CCN ATG TAY TTN TTC TTA	SEQ ID NO: 94
	CCN ATG TAY TTN TTC TTC	SEQ ID NO: 95
	CCN ATG TAY TTN TTC TTG	SEQ ID NO: 96
	CCN ATG TAY TTN TTC TTT	SEQ ID NO: 97
	CCN ATG TAY TTN TTT CTA	SEQ ID NO: 98
15	CCN ATG TAY TTN TTT CTC	SEQ ID NO: 99
	CCN ATG TAY TTN TTT CTG	SEQ ID NO: 100
	CCN ATG TAY TTN TTT CTT	SEQ ID NO: 101
	CCN ATG TAY TTN TTT TTA	SEQ ID NO: 102
	CCN ATG TAY TTN TTT TTC	SEQ ID NO: 103
20	CCN ATG TAY TTN TTT TTG	SEQ ID NO: 104
	CCN ATG TAY TTN TTT TTT	SEQ ID NO: 105

The TM7.5 primer set was designed to contain the reverse complement of all sequences capable of encoding the TM7.5 amino acid sequence motif P-F/L/I/V-I/V-F/Y-S/T-L. The sequences of the TM7.5 primers are as follows:

	YYTNGTNYTNRYNCYGATANATNATNGGRTT	SEQ ID NO: 106
	YTRTTNCKNAGNWRTANATRAANGGRTT	SEQ ID NO: 107
	TCYTTRTTNCKNAGNGWRTANAYNASNGGRTT	SEQ ID NO: 108
30	TCNTSRTTNCKNARNsARTANATNATNGGRTT	SEQ ID NO: 109
	RTTNCKNARNsWRTANATRAANGGRTT	SEQ ID NO: 110

Reagents and enzymes for amplification were from the Advantage cDNA amplification kit (Clontech). A primary amplification reaction was constructed as follows:

35 5 µl olfactory epithelial cDNA (10-20 µg/ml)

 5 µl 10X PCR reaction buffer (Clontech)

 1 µl TM2 primer set (10 µM)

 1 µl TM7.5 primer set (10 µM)

 1 µl dNTP mix (10 mM each dATP, dCTP, dGTP, dTTP)

40 36 µl PCR-grade H₂O

 1 µl Advantage polymerase mix (Clontech)

Amplification was conducted in a PE 480 thermal cycler, using 28 cycles of 95°C for 15 sec, 45°C for 45 sec and 72°C for 2 min. After cycling, the amplification mixture was treated for 1 hour at 37°C with 10 Units of BspEI and 10 Units of PstI restriction enzymes, to degrade non-specific amplification products.

5 The primary amplification products were size-fractionated by agarose gel electrophoresis, and amplification products having a length between 600 and 800 base pairs were selected for secondary amplification.

10 The secondary amplification reaction was conducted identically to the primary amplification reaction, except that the size-selected primary amplification product was used as template. Secondary amplification reactions containing products which generated a specific gel band of between 600 and 800 base pairs were extracted once with phenol/chloroform and once with chloroform, and nucleic acids were precipitated from the reactions by addition of 0.1 volume of 3M NaOAc (pH 4.8), 20 µg glycogen, and 1.5 volumes of cold 95% ethanol. The precipitate was collected by centrifugation, dried and
15 resuspended in 15 µl distilled water. After the precipitate dissolved, 3 µl loading dye was added, and the sample was subjected to electrophoresis on a 1.0% low-melting agarose gel containing ethidium bromide. Electrophoresis was conducted at 60V for approximately 40 min, with a 1 kb marker in adjoining lanes.

20 Following electrophoresis, the gel was illuminated with long-wavelength ultraviolet light, and the band was excised from the gel. The gel slice was placed in a 0.5 ml tube, and the tube was heated at 68°C for 15 min. The temperature of the tube was then equilibrated at 45°C. (This is conveniently accomplished in a thermal cycler.) AgarACE™ (Promega) was then added to the tubes, according to the manufacturer's instructions, and incubation at 45°C was continued for 15 min. As a general rule, 2 µl of enzyme per 50 µl of gel slice is
25 adequate. Following AgarACE™ digestion, the digestion mixture was extracted with phenol/chloroform according to the manufacturer's instructions, and nucleic acids were precipitated by addition of 0.1 volume of 3M NaOAc (pH 4.8), 20 µg glycogen, and 1.5 volumes of cold 95% ethanol. The precipitate was collected by centrifugation, dried and resuspended in 5 µl distilled water.

30 Gel-purified amplification products were cloned using the TOPO XL PCR Cloning Kit (Invitrogen) according to the manufacturer's instructions. After cloning, individual

colonies were selected at random for nucleotide sequence analysis of the inserts, using procedures for sequence determination that are well-known to those of skill in the art.

Example 2: Use of olfactory receptor polypeptides for screening

5 Components of a scent are identified by determining the interaction between one or more potential odorant molecules and one or more OR polypeptides. For example, if a known original scent involves binding to a particular set of ORs, any subsequent set of molecules which bind to that same set of ORs and stimulate or inhibit the response of the ORs to the same extent as the original scent is capable of re-creating that original scent. If
10 each of the subsequent set of molecules interacts with one and only one OR, then the set of molecules is composed of receptor primary scent components. In similar fashion, scents which involve binding of multiple ORs can be recreated by identifying a molecule, or combination of molecules, which binds to that particular set of ORs.

 Binding of molecules to ORs is determined by a number of methods that are well-
15 known in the art including, but not limited to, in vitro and in silico methods as described herein. Binding of molecules to ORs can also be determined or approximated by using quantitative structure-activity relationships as described herein.

Example 3: Identification of agonists and antagonists of olfactory receptors

20 Interaction of an odorant with a particular OR embedded in the membrane of an olfactory neuron will activate a signaling cascade within the neuron, ultimately resulting in the perception of a particular smell. A molecule, produced for example by combinatorial chemistry, which activates a similar or identical signaling cascade, will induce the perception of the same smell. Such a molecule would be considered a OR agonist. An OR
25 agonist, once identified, can be used as a probe to identify additional agonists, as well as antagonists, of that particular OR.

 Assays for the activation and the end product(s) of signaling cascades are known in the art. For example, direct Ca^{++} imaging can be employed, using either dye -labeled Ca^{++} or dyes that are sensitive to Ca^{++} concentration. Such dyes, and techniques for their use,
30 are available from, for example, Molecular Dynamics (Sunnyvale, CA) and Molecular Probes (Eugene, OR).

Because ORs are transmembrane proteins, identification of agonists and/or antagonists for a particular OR require that the OR is present either in a living cell or in a membrane preparation.

In one embodiment of a method for the determination of OR agonists or
5 antagonists, a known OR agonist is labeled *in situ*, or is resynthesized with an attached label, and is bound to an OR. The effect of various test molecules on the binding of the labeled OR agonist is then determined. Labeling of an OR agonist is accomplished by any of a number of methods that are known to those of skill in the art including, but not limited to, various fluorescent labels (for example, chemical fluorochromes or green fluorescent
10 protein). Binding of the OR agonist is measured by any of a number of competitive binding assays, as are known in the art. A test molecule that displaces the agonist from the OR (*i.e.*, reduces the binding of the agonist) is identified as a candidate agonist or antagonist of the particular OR. In a subsequent experiment, the candidate molecule is bound to the OR, and the effect on the signaling cascade induced by the original agonist is
15 determined. A similar of higher level of activation is indicative of an agonist; while a reduced level of activation of the signaling cascade reflects the action of an antagonist.

In additional embodiments of the displacement assay, an unlabeled agonist is used, and its degree of binding is determined by mass spectrometry. *See*, for example, U.S. Patent No. 5,894,063; U.S. Patent No. 5,719,060; and Wei *et al.* (1999) *Nature* 399:243-
20 246.

In another embodiment, fluorescent microparticles ("beads"), which can be separated by flow cytometry, are used to identify OR agonists and antagonists. Such beads are available, for example, from Luminex (Austin, TX). Multiple different ORs are attached to the beads, wherein each distinct color of bead is associated with a particular
25 OR. The collection of beads, containing different ORs, is exposed to a test molecule or a collection of test molecules, such as can be synthesized by combinatorial chemistry, and binding of the test molecule(s) is determined, for example, by use of a labeled ligand of the test molecule(s). The beads are sorted according to their color by flow cytometry. Correlation of test molecule binding with bead color allows the determination of test
30 molecules capable of binding to the OR. Agonist or antagonist function of an OR binding molecule is determined by methods described *supra*.

Example 4: Summary of search parameters for homology searches

Step 1: (masking) rempolyatmask raw sequence on -NONE- [?] with remAT_moderate (15) . Continue to step 2.

Step 2: (masking) mask masked sequence from step 1 on RepBase [N] with
5 mask_moderate (85) . Continue to step 3.

Step 3: (masking) mask masked sequence from step 2 on VecBase [N] with
mask_moderate (85) . Continue to step 4.

Step 4: blastn masked sequence from step 3 on NR-Nuc [N] with blastn_10_hits (V=10
B=10) . If the P/Z score is $> 1.0E-50$, or no hits are found go to step 5. Otherwise, stop.

10 Step 5: blastx masked sequence from step 3 on NR-Pro [P] with blastx_10_hits (V=10
B=10) . If the P/Z score is $> 1.0E-50$, or no hits are found go to step 6. Otherwise, stop.

Step 6: blastn masked sequence from step 3 on GB_CurAwareness-Nuc [N] with
blastn_10_hits (V=10 B=10) . If the P/Z score is $> 1.0E-50$, or no hits are found go to step
7. Otherwise, stop.

15 Step 7: blastx masked sequence from step 3 on GB_CurAwareness-Pro [P] with
blastx_10_hits (V=10 B=10) . If the P/Z score is $> 1.0E-50$, or no hits are found go to step
8. Otherwise, stop.

Step 8: tblastx masked sequence from step 3 on NR-Nuc [N] with tblastx_10_hits (V=10
B=10) . If the P/Z score is $> 1.0E-50$, or no hits are found go to step 9. Otherwise, stop.

20 Step 9: blastn masked sequence from step 3 on EST [N] with blastn_10_hits (V=10 B=10) .
If the P/Z score is $> 1.0E-50$, or no hits are found go to step 10. Otherwise, stop.

Step 10: blastn masked sequence from step 3 on STS [N] with blastn_10_hits (V=10 B=10)
. Stop.

Example 5: Summary of search results

Step	Program	Database	Score	Sequences By Best Hit's Score				No Hits	Run	Not Finished	Not Run
1	rempolyat mask	NONE-[P]	P/Z/E	0	> 1.0 >=	0	>= 1.0 >	0	74	74	0
2	mask	RepBase[N]	P/Z/E	0	> 1.0 >=	0	>= 1.0 >	0	74	74	0
3	mask	VecBase[N]	P/Z/E	0	> 1.0 >=	0	>= 1.0 >	0	74	74	0
4	blastn	NR-Nuc[N]	P/Z/E	46	< 1.0E-20 <=	28		0	74	0	0
5	blastx	NR-Pro[P]	P/Z/E	16	< 1.0E-20 <=	34		0	50	0	24
6	blastn	GB_CurAwareness-Nuc[N]	P/Z/E	17	< 1.0E-20 <=	31		0	48	0	26
7	blastx	GB_CurAwareness-Pro[P]	P/Z/E	13	< 1.0E-20 <=	28		2	43	0	31
8	tblastx	NR-Nuc[N]	P/Z/E	14	< 1.0E-20 <=	29		0	43	0	31
9	blastn	EST[N]	P/Z/E	10	< 1.0E-20 <=	33		0	43	0	31
10	blastn	STS[N]	P/Z/E	5	< 1.0E-20 <=	33		0	38		

5

Example 6. Datamining and analysis from GenBank

Datamining. A datamining pipeline was built to detect all available OR-like sequences in the public databases and to update the results as new database versions are released. tblastn (Altschul et al., 1997) was used to compare amino acid query sequences to the non-redundant version of GenBank (partitions nt, htg and est_human, all updated to August 6th, 2000), with a non-stringent expectation value cutoff of 1e-4. The queries used included 96 curated OR sequences representing all known families (SEQ ID NO:2651 through SEQ ID NO:2747) and 249 additional HORDE entries (SEQ ID NO:2402 through SEQ ID NO:2650). In a second round 105 newly mined mouse genes (SEQ ID NO:2296 through SEQ ID NO:2401) and 344 newly mined human genes (SEQ ID NO:2009 through SEQ ID NO:2295) were used as additional queries (all datasets are available

electronically). All resulting database entries were catalogued by species and subdivided into four types: mRNA, EST, DNA and genomic, the latter including entries annotated with keyword HTGS_PHASE1-3, or with length at least 10 kb. Low-pass genomic sampling sequences were ignored (keyword HTGS_PHASE0). In addition, a set of 132 olfactory sequence tag (OST) sequences was used. All sequences used were split into contigs according to annotation or, where unavailable, according to runs of at least 50 Ns. All resulting contigs were analyzed for interspersed repeats using RepeatMasker (Smit and Green, 1997). Subcontigs were defined as segments between interspersed repeats, ignoring simple repeats and low-complexity regions.

Localization of genomic clones. The University of Santa Cruz (UCSC) Working Draft Sequence ("golden path", <http://genome.ucsc.edu>) presents a first tentative assembly of the finished and draft human genomic sequence based on the WUSTL clone map (<http://genome.wustl.edu/gsc>). The "golden path" data was used to assign a coordinate to each finished or unfinished genomic clone, in Mb from the p telomere. In parallel, the Unified DataBase (UDB) was used to assign similar Mb coordinates to the clones, based on their marker contents (Chalifa-Caspi et al., 1998). The two maps are largely colinear, and were integrated based on the coordinates of clones that could be localized in both. Clones for which no coordinate could be obtained by either method were assigned a chromosome according to UDB, by sequence similarity to another mapped clone, by annotation, or by e-PCR (Schuler, 1997).

Detection of OR sequences. Each subcontig was compared using FASTY (Pearson et al., 1997) to a curated set of OR protein sequences from several species, yielding a conceptual translation product. The possibility of a pseudogene being disrupted by the insertion of interspersed repeats was taken into account, with the two or more resulting parts being therefore located in different subcontigs. Such compatible candidate sequences were automatically joined into a combined reconstructed pseudogene. Whenever possible, all resulting sequences were trimmed or extended to use a suitable ATG codon for initiation and to end at a stop codon, but avoiding those stop codons that yield products shorter than 275 amino acids. The sequences were finally split into OR or non-OR by comparing them to previously recognized OR sequences and to a non-redundant database of non-OR GPCRs which we extracted from Swiss-Prot. To be automatically classified as an OR, a

new sequence has to be at least 40% identical over at least 100 amino acids to another OR. A more stringent cutoff (50%) was required for shorter sequences.

Definition of OR genes. A given gene could be represented in more than one overlapping genomic clone. Such redundancy was removed by considering two sequences as representing the same gene, if they are in the same chromosome, located in clones less than 300 kb apart and at least 99% identical at the nucleotide level. An exception to this rule is when two genes coappear in the same clone, in which case they were considered to be distinct genes. Sequences localized to a chromosome but without a coordinate were only compared to other sequences within that chromosome, and finally those sequences lacking a chromosomal assignment were compared to the rest, applying only the criterion of sequence similarity. For each resulting gene with more than one constituent sequence, a consensus nucleotide sequence was created after multiple alignment by ClustalW (Higgins et al., 1996) using the fast comparison parameter. This was followed by conceptual translation and end trimming to suitable start and stop codons, as above. Genes with length at least 275 amino acids without frame disruptions (frameshifts, in-frame stop codons or disrupting interspersed repeats) were considered to be full-length and apparently intact. For partial sequences without frame disruptions no statement could be made on their apparent functionality, except when the partial sequences were observed in the genome as such, in which case they were considered to be pseudogenes. Finally, each OR gene was assigned a family and subfamily by amino acid sequence similarity to previously classified OR genes.

The references cited in this example are: Altschul, S. F., Madden, T. L., Schaffer, A. A., Zhang, J., Zhang, Z., Miller, W. and Lipman, D. J. (1997) Gapped BLAST and PSI-BLAST: a new generation of protein database search programs. *Nucleic Acids Res* 25: 3389-402; Chalifa-Caspi, V., Prilusky, J. and Lancet, D. (1998) The Unified Database. Weizmann Institute of Science, Bioinformatics Unit and Genome Center (Rehovot, Israel). World Wide Web URL: bioinformatics.weizmann.ac.il/udb; Higgins, D. G., Thompson, J. D. and Gibson, T. J. (1996) Using CLUSTAL for multiple sequence alignments. *Methods Enzymol* 266: 383-402; Pearson, W. R., Wood, T., Zhang, Z. and Miller, W. (1997) Comparison of DNA sequences with protein sequences. *Genomics* 46: 24-36; Schuler, G. D. (1997) Sequence mapping by electronic PCR. *Genome Res* 7: 541-50; and Smit, A. F.

A. and Green, P. (1997) RepeatMasker at URL: repeatmasker.genome.washington.edu/cgi-bin/RM2_req.pl.

5 Tables 1 and 2 contain additional information regarding SEQ ID NO. 153 to SEQ ID NO. 1085. The explanation of the entries in Tables 1 and 2 is as follows:

Symbol: The Human Genome Organization gene symbol, as allotted by a procedure to be published soon. OR = Olfactory Receptor, numeral to the immediate right - family designation, capital letters - subfamily designation, rightmost numeral - individual gene within subfamily, n appearing when such number is not assigned yet; P = Pseudogene.

10 All ORs within a family share at least 40% protein sequence identity.

 All ORs within a subfamily share at least 60% protein sequence identity.

HORDE: The H serial number within the Human Olfactory Receptor Data Exploratorium (URL bioinfo.weizmann.ac.il/HORDE). The numeral 38 represents the HORDE build (version), gxxx is the individual gene number.

15 Digi: Appearance of a DSnn serial number here means that the sequence has been PCR-amplified from human olfactory epithelial cDNA using degenerate primers at the transmembrane helix 2 and transmembrane helix 7. See separate page for explanations on the analysis of the DS entries.

20 OST: OSTnnn is the serial number of the sequence in the Olfactory Sequence Tag collection in the Lancet laboratory (URL bioinfo.weizmann.ac.il/HORDE). Appearance here means that the sequence has been PCR-amplified from human genomic DNA using degenerate primers at the transmembrane helix 2 and transmembrane helix 7. There are a total of 112 OST sequences.

25 Trivial name: One or more aliases given to the same gene by different laboratories. Many of the trivial names are of the form ORnn-xx, whereby nn is a chromosome number and xx is an arbitrary numerical identifier.

Tran: (transcribed) Plus appears if the entry was sequenced from cDNA, or was found in the Expressed Sequence Tags (EST) databases. Plus also appears if in the public databases the gene was annotated as mRNA.

30 Int.: (intact) "Yes" indicates that the gene may be intact, as there are no obvious sequence frame disruptions. "Put" (putative) indicates the same, except that the known sequence is short, hence there may be disruptions in the unsequenced segments. "Pol"

indicates a polymorphism between intact and pseudogenic alleles. When no word appears, this indicates a pseudogene.

E: (Extent) FL indicates that the Full Length sequence is known (typically 310 ± 30 amino acids).

5 D: The number of sequence disruptions in the known sequence of a pseudogene.

C: The human chromosomal location of the OR gene, assigned as described under Mb coord.

Mb coord: The location of the OR gene within a human chromosome, in megabase units, beginning at the p-telomere and ending at the q-telomere, computed based on
10 integrating information from Unified Database (URL is bioinfo.weizmann.ac.il/udb) and the University of California Santa Cruz (URL is genome.ucsc.edu).

CDR: The 17 amino acids suggested to line the odorant ligand binding pocket, delineated by the extracellular 2/3 of transmembrane helices 3,4 and 5. The assignment is based on an algorithm at URL

15 bioinformatics.weizman.ac.il/HORDE/humanGenes/CDR.html.

%: (% id) The percent protein identity between the human sequence in the current line and the known rodent (rat or mouse) OR sequence to which it bears the highest similarity.

S: (Species) Rat (R) or mouse (M).

20 Acc: The Genbank accession number of the clone that contains the rodent sequence.

Range: The positions x ... y of the first and last bases within the rodent which constitute the OR coding region. If $x > y$ then the OR is on the reverse strand.

Table 1

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
153	OR10D3	H38g001			HSHTPCR09			
154	OR7EnP	H38g002						FL
155	OR1D5	H38g003		OST901	OR17-31	+	pol	FL
156	OR10NnP	H38g00						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
		4						
157	OR2F1	H38g00 5		OST902	OLF3;OR7-139;OR7-140	+	yes	FL
158	OR7EnP	H38g00 6						FL
159	OR8FnP	H38g00 7						FL
160	OR2Q1P	H38g00 8			DJ0669B10;OR7-2			FL
161	OR2W1	H38g00 9			AL035402- B;dJ88J8.1;hs6M1-15		yes	FL
162	OR7EnP	H38g01 0				+		FL
163	OR6B1	H38g01 1	DS119		OR7- 3;WUGSC:H_DJ0669B10. 3	+	yes	FL
164	OR10Kn	H38g01 2					yes	FL
165	ORnP	H38g01 3				+		FL
166	OR4F2P	H38g01 4			HS191N21;dJ191N21.4; hs6M1-11			FL
167	OR7EnP	H38g01 5						FL
168	OR1F2P	H38g01 6			OLFMF2	+	yes	FL
169	OR2P1P	H38g01 7			AL035402- A;dJ88J8.2;hs6M1-26			
170	OR7E43P	H38g01 8		OST903	OR4-116			FL
171	OR4F1	H38g01 9			HSDJ0609N19			FL
172	OR7E55P	H38g02 0		OST904	OR2DG;OR3.2			FL
173	OR13Dn	H38g02 1					yes	FL
174	OR4CnP	H38g02 2						FL
175	OR10D1P	H38g02 3		OST074	HSHTPCRX03	+		FL
176	OR4Cn	H38g02					yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
		4						
177	OR8GnP	H38g02 5						
178	OR13CnP	H38g02 6						FL
179	OR4CnP	H38g02 7						FL
180	OR13Cn	H38g02 8					yes	FL
181	OR4CnP	H38g02 9						
182	OR51Bn	H38g03 0					yes	FL
183	OR7E5P	H38g03 1		OST905	OR11-12			FL
184	OR13Cn	H38g03 2					yes	FL
185	OR4Sn	H38g03 3					yes	FL
186	OR51BnP	H38g03 4						FL
187	OR6JnP	H38g03 5						FL
188	OR51Bn	H38g03 6					yes	FL
189	OR7EnP	H38g03 7						FL
190	OR2An	H38g03 8					yes	FL
191	OR7E22P	H38g03 9			OR3.6;OR6DG			FL
192	OR7E4P	H38g04 0			OR11-11a			FL
193	OR7E66P	H38g04 1		OST906	OR3.3;OR3DG;hg630			FL
194	OR6Mn	H38g04 2					yes	FL
195	OR2ALnP	H38g04 3						
196	OR6MnP	H38g04 4						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
197	OR4D1	H38g04 5			AC005962-A;HSTPCR16	+	yes	FL
198	OR5D2P	H38g04 6		OST907	OR11-7a;OR912-91			FL
199	OR7E38P	H38g04 7		OST127	AC004967	+		FL
200	OR4D2	H38g04 8			AC005962-B		yes	FL
201	OR7E7P	H38g04 9			AC004967-A			FL
202	OR5AHnP	H38g05 0						
203	OR2U2P	H38g05 1			AL050339- B;dJ974I11.2;hs6M1- 23			FL
204	OR2U1P	H38g05 2			974I11;AL050339- C;dJ974I11.3;hs6M1- 24			FL
205	OR2H2	H38g05 3			AC006137- A;dJ271M21.2;hs6M1- 12		yes	FL
206	OR2H5P	H38g05 4		OST616	HS271M21;hs6M1-13			FL
207	OR2In	H38g05 5				+	yes	FL
208	OR11HnP	H38g05 6						FL
209	OR7EnP	H38g05 7				+		
210	OR9In	H38g05 8					yes	FL
211	OR2AFnP	H38g05 9						FL
212	OR13KnP	H38g06 1						FL
213	OR13Cn	H38g06 2					yes	FL
214	OR13Fn	H38g06 3					yes	FL
215	OR9Qn	H38g06 4					yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
216	OR2TnP	H38g06 5						FL
217	OR4Kn	H38g06 6					yes	FL
218	OR2B8P	H38g06 7			dJ313I6.4;hs6M1-29P		yes	FL
219	OR2Tn	H38g06 8					yes	FL
220	OR4Kn	H38g06 9					yes	FL
221	OR2A4	H38g07 0			WUGSC:H_DJ0988G15.2	+	yes	FL
222	OR7EnP	H38g07 1						FL
223	OR4Kn	H38g07 2					yes	FL
224	OR13InP	H38g07 3						FL
225	OR7EnP	H38g07 4						FL
226	OR6Jn	H38g07 5					yes	FL
227	OR4Mn	H38g07 6					yes	FL
228	OR4VnP	H38g07 7						FL
229	OR6Xn	H38g07 8					yes	FL
230	OR51Gn	H38g07 9					yes	FL
231	OR6EnP	H38g08 0						FL
232	OR4NnP	H38g08 1						FL
233	OR6MnP	H38g08 2						FL
234	OR4Nn	H38g08 3					yes	FL
235	OR4Cn	H38g08 4					yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
236	OR4KnP	H38g08 5						FL
237	ORnP	H38g08 6						
238	OR5D3	H38g08 7		OST908	OR11-8b;OR11-8c			
239	OR2G1P	H38g08 8	DS13;D S16	OST619	dJ974I11.4;hs6M1-25	+		FL
240	OR4Kn	H38g08 9					yes	FL
241	OR8BnP	H38g09 0						FL
242	OR2B2	H38g09 1			OR6-1;dJ193B12.4		yes	FL
243	OR7EnP	H38g09 2						FL
244	OR4KnP	H38g09 3						FL
245	OR2AD1P	H38g09 4			dJ25J6.1;hs6M1-8P			FL
246	OR1AAnP	H38g09 5						FL
247	OR1E3P	H38g09 6			OR17-210			FL
248	OR8BnP	H38g09 7						FL
249	OR5Hn	H38g09 8					yes	FL
250	OR1G1	H38g09 9		OST909	OR17-130;OR17-209	+	yes	FL
251	OR5HnP	H38g10 0						FL
252	ORnP	H38g10 1						
253	ORnP	H38g10 2						
254	OR4PnP	H38g10 3						FL
255	OR13Hn	H38g10 4					yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
256	OR7D1P	H38g10 5		OST910	CIT-B-440L2;OR19-131;OR19-A			FL
257	OR4KnP	H38g10 6						FL
258	OR7E24	H38g10 7		OST911	CIT-B-440L2;OR19-8	+		FL
259	OR51NnP	H38g10 8						FL
260	OR7E18P	H38g10 9		OST912	OR19-14;TPCR26	+		FL
261	OR7E19P	H38g11 0		OST913	HSCIT-B-440L2;OR19-7;TPCR110	+		FL
262	OR7E41P	H38g11 1		OST914	OR11-20;hg84			FL
263	OR2R1	H38g11 2		OST058				FL
264	OR10ACn P	H38g11 3						FL
265	OR51Ln	H38g11 4					yes	FL
266	OR52JnP	H38g11 5						FL
267	OR9LnP	H38g11 6						
268	OR51PnP	H38g11 7						FL
269	OR5HnP	H38g11 8						FL
270	OR51An	H38g11 9					yes	FL
271	OR5HnP	H38g12 0						FL
272	ORnP	H38g12 1						
273	OR52En	H38g12 2					yes	FL
274	OR5Hn	H38g12 3					yes	FL
275	OR4CnP	H38g12 4						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
276	OR52En	H38g12 5					yes	FL
277	OR10Dn	H38g12 6					yes	FL
278	OR5HnP	H38g12 7						FL
279	OR13An	H38g12 8					yes	FL
280	OR5HnP	H38g12 9						FL
281	OR5Kn	H38g13 0					yes	FL
282	OR7EnP	H38g13 1						FL
283	OR4DnP	H38g13 2						FL
284	OR2ARnP	H38g13 3						
285	OR7E29P	H38g13 4		OST032				FL
286	OR4CnP	H38g13 5						FL
287	OR5PnP	H38g13 6						FL
288	OR7EnP	H38g13 7						FL
289	OR56An	H38g13 8					yes	FL
290	OR56AnP	H38g13 9						
291	OR5Pn	H38g14 0					yes	FL
292	OR7E53P	H38g14 1		OST915	OR3-142;OR3-143			FL
293	OR5Pn	H38g14 2					yes	FL
294	OR52Ln	H38g14 3					yes	FL
295	OR5E1	H38g14 4			HSTPCR24	+		FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
296	OR56AnP	H38g14 5						
297	OR4KnP	H38g14 6						
298	OR52Ln	H38g14 7					yes	FL
299	OR7EnP	H38g14 8						
300	OR52XnP	H38g14 9						FL
301	ORnP	H38g15 0						
302	OR56An	H38g15 1					yes	FL
303	OR56AnP	H38g15 2						
304	OR1R1P	H38g15 3			OR17-1			FL
305	OR52EnP	H38g15 4						FL
306	OR51AnP	H38g15 5						FL
307	OR51An	H38g15 6					yes	FL
308	OR4CnP	H38g15 7						FL
309	OR52JnP	H38g15 8						FL
310	OR4RnP	H38g15 9						
311	OR52Jn	H38g16 0					yes	FL
312	OR4CnP	H38g16 1						FL
313	OR51AnP	H38g16 2						FL
314	OR7EnP	H38g16 3						FL
315	OR5MnP	H38g16 4						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
316	OR10ABn P	H38g16 5						FL
317	OR52SnP	H38g16 6						FL
318	OR5Mn	H38g16 7					yes	FL
319	OR10Sn	H38g16 8					yes	FL
320	OR5MnP	H38g16 9						FL
321	OR10Gn	H38g17 0					yes	FL
322	ORnP	H38g17 1						FL
323	OR5MnP	H38g17 2						FL
324	OR10GnP	H38g17 3						
325	OR10TnP	H38g17 4						FL
326	ORnP	H38g17 5						
327	OR10RnP	H38g17 6						FL
328	OR5MnP	H38g17 7						FL
329	OR7EnP	H38g17 8						FL
330	OR10Tn	H38g17 9					yes	FL
331	OR1E1	H38g18 0	DS37;D S43;DS 46	OST916	HGMP07I;OR17-2;OR17- 32	+	yes	FL
332	OR5BKnP	H38g18 1						
333	OR5MnP	H38g18 2						FL
334	OR3A3	H38g18 3		OST917	OR17-137;OR17- 16;OR17-201	+	yes	FL
335	OR10ADn P	H38g18 4	DS10			+		FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
336	OR10Rn	H38g18 5				+	yes	FL
337	OR5TnP	H38g18 6						FL
338	OR4GnP	H38g18 7						FL
339	OR6Yn	H38g18 8					yes	FL
340	OR1E2	H38g18 9		OST918	OR17-135;OR17-93	+	yes	FL
341	OR8Hn	H38g19 0					yes	FL
342	OR4Fn	H38g19 1					yes	FL
343	OR10Kn	H38g19 2					yes	FL
344	OR7LnP	H38g19 3						
345	OR8InP	H38g19 4						FL
346	OR10RnP	H38g19 5						
347	OR2AFnP	H38g19 6						FL
348	OR8Kn	H38g19 7					yes	FL
349	ORnP	H38g19 8						
350	OR8KnP	H38g19 9						FL
351	OR51Hn	H38g20 0					yes	FL
352	OR7EnP	H38g20 1						FL
353	ORnP	H38g20 2						
354	OR5BMnP	H38g20 3						FL
355	OR10GnP	H38g20 4						

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
356	OR2Yn	H38g20 5					yes	FL
357	OR10DnP	H38g20 6						FL
358	OR3BnP	H38g20 7						FL
359	OR8Dn	H38g20 8					yes	FL
360	OR5RnP	H38g20 9						
361	OR10Gn	H38g21 0					yes	FL
362	OR5BDnP	H38g21 1						FL
363	OR5ALnP	H38g21 2						FL
364	OR52HnP	H38g21 3						
365	OR10Gn	H38g21 4					yes	FL
366	OR5Mn	H38g21 5					yes	FL
367	OR51Mn	H38g21 6					yes	FL
368	OR6Tn	H38g21 7	DS15;D S146;D S147			+	yes	FL
369	OR6DnP	H38g21 8						FL
370	OR4B1	H38g21 9		OST208			yes	FL
371	OR5ALnP	H38g22 0						FL
372	OR51Qn	H38g22 1					yes	FL
373	OR4Dn	H38g22 2					yes	FL
374	OR52Nn	H38g22 3					yes	FL
375	OR4Xn	H38g22 4					yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
376	OR8Jn	H38g22 5					yes	FL
377	OR51JnP	H38g22 6						FL
378	OR10Gn	H38g22 7					yes	FL
379	OR52En	H38g22 8					yes	FL
380	OR4Xn	H38g22 9					yes	FL
381	OR10A2	H38g23 0	DS5;DS 53;DS5 6	OST363		+		FL
382	OR5Mn	H38g23 1					yes	FL
383	OR52En	H38g23 2					yes	FL
384	OR8Kn	H38g23 3					yes	FL
385	OR10An	H38g23 4	DS55			+	yes	FL
386	OR8LnP	H38g23 5						FL
387	OR5BPnP	H38g23 6						
388	OR52Nn	H38g23 7					yes	FL
389	ORnP	H38g23 8						
390	OR8JnP	H38g23 9						FL
391	OR5Mn	H38g24 0					yes	FL
392	OR52En	H38g24 1					yes	FL
393	OR5Tn	H38g24 2					yes	FL
394	OR52NnP	H38g24 3						FL
395	OR4B2P	H38g24 4		OST919	hg449			FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
396	OR51KnP	H38g24 5						FL
397	OR52QnP	H38g24 6						FL
398	OR4Fn	H38g24 7					yes	FL
399	OR11MnP	H38g24 8						
400	OR52Nn	H38g24 9					yes	FL
401	OR56An	H38g25 0					yes	FL
402	OR5AwnP	H38g25 1						FL
403	OR52Nn	H38g25 2					yes	FL
404	ORnP	H38g25 3						
405	OR52EnP	H38g25 4						FL
406	OR5BHnP	H38g25 5						FL
407	OR4QnP	H38g25 6						FL
408	OR51En	H38g25 7					yes	FL
409	OR11KnP	H38g25 8						FL
410	OR12D1P	H38g25 9			AC004174- B;dJ994E9.7;hs6M1-19			FL
411	OR4NnP	H38g26 0				+		FL
412	OR11A1	H38g26 1			AC004174- A;dJ994E9.6;hs6M1-18	+	yes	FL
413	OR10C1	H38g26 2			AC004174;dJ994E9.5;h s6M1-17	+	yes	FL
414	OR2H1	H38g26 3	DS114		OLFR42A-9004-14;OR6- 2;dJ994E9.4;hs6M1-16	+	yes	FL
415	OR9RnP	H38g26 4						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
416	OR4FnP	H38g26 5						
417	OR7D4	H38g26 6		OST920	OR19-B;hg105			FL
418	OR7E25P	H38g26 7		OST921	CIT-B-440L2;OR19-C			FL
419	OR2D2	H38g26 8			OR11-610		yes	FL
420	OR10An	H38g26 9					yes	FL
421	OR2WnP	H38g27 0				+		
422	OR7E16P	H38g27 1		OST922	CIT-B-440L2;OR19- 133;OR19-9			FL
423	OR52Pn	H38g27 2					yes	FL
424	OR6AnP	H38g27 3						FL
425	OR7D2	H38g27 4	DS70;D S73	OST923	HTPCRHO3;OR19-4	+	yes	FL
426	OR52UnP	H38g27 5						FL
427	OR2AGn	H38g27 6					yes	FL
428	OR7G3	H38g27 7		OST085			yes	FL
429	OR56BnP	H38g27 8						FL
430	OR2AGnP	H38g27 9						FL
431	OR56Bn	H38g28 0					yes	FL
432	OR6AnP	H38g28 1						FL
433	OR4FnP	H38g28 2						FL
434	OR6Wn	H38g28 3					yes	FL
435	OR4Mn	H38g28 4					yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
436	OR52YnP	H38g28 5						
437	OR11HnP	H38g28 6						FL
438	OR9An	H38g28 7					yes	FL
439	OR5Mn	H38g28 8					yes	FL
440	OR6Vn	H38g28 9					yes	FL
441	OR4Nn	H38g29 0				+	yes	FL
442	OR51AnP	H38g29 1						FL
443	OR9PnP	H38g29 2						
444	OR4H6P	H38g29 3			OR15-71;OR15-82			FL
445	OR51FnP	H38g29 4						FL
446	OR7E1P	H38g29 5			AC004923			FL
447	OR51Tn	H38g29 6					yes	FL
448	OR2Vn	H38g29 7					yes	FL
449	OR51HnP	H38g29 8						FL
450	OR51An	H38g29 9					yes	FL
451	OR2AInP	H38g30 0						FL
452	OR2F2	H38g30 1			OR7- 1;WUGSC:H_DJ0669B10. 1		yes	FL
453	OR1F12	H38g30 2			dJ313I6.5;hs6M1-35P		yes	FL
454	OR7G1P	H38g30 3			OR19-15		yes	FL
455	OR7G2	H38g30 4		OST260			yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
456	OR1M1	H38g30 5		OST924	OR19-6		yes	FL
457	OR51UnP	H38g30 6						
458	OR52Hn	H38g30 7					yes	FL
459	OR1F1	H38g30 8		OST925	OLFMF;OR16-36;OR16- 37;OR16-88;OR16- 89;OR16-90	+	yes	FL
460	OR10PnP	H38g30 9						
461	OR4FnP	H38g31 0						FL
462	OR2T1	H38g31 1			OR1-25		yes	FL
463	OR7EnP	H38g31 2						FL
464	OR51Gn	H38g31 3					yes	FL
465	OR2Tn	H38g31 4					yes	FL
466	OR5BGnP	H38g31 5						
467	OR5WnP	H38g31 6						FL
468	OR51Sn	H38g31 7					yes	FL
469	OR5WnP	H38g31 8						
470	OR51AnP	H38g31 9						FL
471	OR5Dn	H38g32 0					yes	FL
472	OR7EnP	H38g32 1						FL
473	OR51Fn	H38g32 2					yes	FL
474	OR5Dn	H38g32 3					yes	FL
475	OR52Rn	H38g32 4					yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
476	ORnP	H38g32 5						FL
477	OR7EnP	H38g32 6						FL
478	OR6Qn	H38g32 7					yes	FL
479	OR4Fn	H38g32 8					yes	FL
480	OR7EnP	H38g32 9						
481	OR7En	H38g33 0					yes	FL
482	OR4Nn	H38g33 1					yes	FL
483	OR2ASnP	H38g33 2						
484	OR11Hn	H38g33 3					yes	FL
485	OR2Tn	H38g33 4					yes	FL
486	OR2TnP	H38g33 5						
487	OR2AKnP	H38g33 6						FL
488	ORnP	H38g33 7						
489	OR5DnP	H38g33 8						FL
490	OR7EnP	H38g33 9						
491	OR5L2	H38g34 0			HSHTPCR16	+	yes	FL
492	OR5Dn	H38g34 1					yes	FL
493	ORnP	H38g34 2						
494	OR10Qn	H38g34 3					yes	FL
495	OR9MnP	H38g34 4						

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
496	OR7E62P	H38g34 5		OST926	OR2-4;OR2-52;OR2- 53;OR2-75			FL
497	OR9LnP	H38g34 6						FL
498	OR7E46P	H38g34 7		OST379				FL
499	OR1S1	H38g34 8		OST034			yes	FL
500	OR5DnP	H38g34 9						
501	OR9InP	H38g35 0						FL
502	OR5Dn	H38g35 1					yes	FL
503	OR9QnP	H38g35 2						FL
504	OR51CnP	H38g35 3						
505	OR5WnP	H38g35 4						
506	OR9InP	H38g35 5						FL
507	OR51AnP	H38g35 6						FL
508	OR5L1	H38g35 7		OST262			yes	FL
509	OR7EnP	H38g35 8				+		
510	OR5BLnP	H38g35 9						
511	OR51En	H38g36 0					yes	FL
512	OR51Dn	H38g36 1					yes	FL
513	OR52In	H38g36 2					yes	FL
514	OR4KnP	H38g36 3	DS67			+		FL
515	OR52In	H38g36 4					yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
516	OR4KnP	H38g36 5						FL
517	OR52MnP	H38g36 6						FL
518	ORnP	H38g36 7						
519	ORnP	H38g36 8						
520	ORnP	H38g36 9						FL
521	ORnP	H38g37 0						
522	ORnP	H38g37 1						
523	ORnP	H38g37 2						
524	ORnP	H38g37 3						
525	ORnP	H38g37 4						
526	OR6Pn	H38g37 5					yes	FL
527	OR7EnP	H38g37 6						FL
528	ORnP	H38g37 7						
529	OR7EnP	H38g37 8						FL
530	ORnP	H38g37 9						
531	OR10XnP	H38g38 0						FL
532	OR10Zn	H38g38 1					yes	FL
533	OR6KnP	H38g38 2						FL
534	OR6Kn	H38g38 3					yes	FL
535	OR1FnP	H38g38 4						

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
536	OR1ABnP	H38g38 5						
537	OR52MnP	H38g38 6						FL
538	OR1XnP	H38g38 7						FL
539	OR4FnP	H38g38 8						
540	OR52MnP	H38g38 9						FL
541	OR2Vn	H38g39 0					yes	FL
542	OR2V1P	H38g39 1		OST265				FL
543	OR2Zn	H38g39 2					yes	FL
544	OR52KnP	H38g39 3				+		
545	OR10Hn	H38g39 4					yes	FL
546	OR2Dn	H38g39 5					yes	FL
547	OR7EnP	H38g39 6						
548	OR11GnP	H38g39 7						FL
549	ORnP	H38g39 8						
550	OR11Gn	H38g39 9					yes	FL
551	OR11HnP	H38g40 0						FL
552	OR6Kn	H38g40 1					yes	FL
553	OR11Hn	H38g40 2					yes	FL
554	OR6KnP	H38g40 3						
555	OR11HnP	H38g40 4						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
556	OR6KnP	H38g40 5						FL
557	OR6Kn	H38g40 6					yes	FL
558	OR2Ln	H38g40 7					yes	FL
559	OR4GnP	H38g40 8						
560	OR6Nn	H38g40 9					yes	FL
561	OR2LnP	H38g41 0						
562	OR9A1	H38g41 1			HSHTPCR06			
563	OR6Nn	H38g41 2					yes	FL
564	OR10Hn	H38g41 3					yes	FL
565	OR7EnP	H38g41 4						FL
566	OR2AQnP	H38g41 5						
567	OR2LnP	H38g41 6						FL
568	OR5ARn	H38g41 7					yes	FL
569	OR7EnP	H38g41 8						FL
570	OR10AAn P	H38g41 9						FL
571	OR10JnP	H38g42 0						FL
572	OR5A1P	H38g42 1	DS69;D S71;DS 128;DS 129	OST181		+	yes	FL
573	OR2AHnP	H38g42 2						FL
574	OR10JnP	H38g42 3						FL
575	OR56BnP	H38g42						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int .	E
		4						
576	OR5M1	H38g42 5		OST050			yes	FL
577	OR52WnP	H38g42 6						
578	OR5AMnP	H38g42 7						FL
579	OR52BnP	H38g42 8						FL
580	OR5MnP	H38g42 9						FL
581	OR5APnP	H38g43 0						FL
582	OR56Bn	H38g43 1					yes	FL
583	OR5APn	H38g43 2					yes	FL
584	OR52Bn	H38g43 3					yes	FL
585	OR9Gn	H38g43 4					yes	FL
586	OR52Kn	H38g43 5					yes	FL
587	OR5MnP	H38g43 6						FL
588	OR52Kn	H38g43 7					yes	FL
589	OR52KnP	H38g43 8				+		FL
590	OR52BnP	H38g43 9						FL
591	OR2B6P	H38g44 0			OR6-31		yes	FL
592	OR2WnP	H38g44 1						FL
593	OR2AnP	H38g44 2						FL
594	ORnP	H38g44 3						
595	OR2LnP	H38g44 4						

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
596	OR2W2P	H38g44 5	DS148		dJ313I6.2;hs6M1-30P	+		FL
597	OR2LnP	H38g44 6						
598	OR2B7P	H38g44 7			dJ313I6.3;hs6M1-31P			FL
599	OR2Ln	H38g44 8					yes	FL
600	OR5BFn	H38g44 9					yes	FL
601	OR2LnP	H38g45 0						FL
602	OR7EnP	H38g45 1						
603	OR1H1	H38g45 2	DS122	OST26		+		FL
604	ORnP	H38g45 3						
605	OR4Dn	H38g45 4					yes	FL
606	OR1Ln	H38g45 5					yes	FL
607	OR5AXn	H38g45 6					yes	FL
608	OR5An	H38g45 7					yes	FL
609	OR5AYn	H38g45 8					yes	FL
610	OR13Gn	H38g45 9					yes	FL
611	OR5BBnP	H38g46 0						
612	OR9GnP	H38g46 1						FL
613	OR2TnP	H38g46 2						FL
614	ORnP	H38g46 3						FL
615	OR1Jn	H38g46 4				+	yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
616	OR2CnP	H38g46 5						FL
617	OR9GnP	H38g46 6						FL
618	OR2C1	H38g46 7			OLFmf3	+	yes	FL
619	OR51AnP	H38g46 8						
620	OR9Gn	H38g46 9					yes	FL
621	OR52Bn	H38g47 0					yes	FL
622	OR1K1	H38g47 1			hg99		yes	FL
623	OR51RnP	H38g47 2						FL
624	OR7EnP	H38g47 3						FL
625	OR52PnP	H38g47 4						FL
626	OR7EnP	H38g47 5						FL
627	OR7EnP	H38g47 6						
628	OR4KnP	H38g47 7	DS66		OR21-1	+		FL
629	OR4KnP	H38g47 8			OR21-2			FL
630	OR7EnP	H38g47 9						
631	OR51In	H38g48 0					yes	FL
632	OR51In	H38g48 1					yes	FL
633	OR2AnP	H38g48 2						
634	OR2A2	H38g48 3		OST008				FL
635	OR2AnP	H38g48 4						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
636	OR2Gn	H38g48 5					yes	FL
637	OR2AnP	H38g48 6						
638	OR6Fn	H38g48 7	DS20;D S21;DS 23;DS2 7;DS28 ;DS39; DS40;D S113;D S126;D S135;D S137;D S138;D S139;D S140;D S141;D S145			+	yes	FL
639	OR2AnP	H38g48 8						
640	OR2Gn	H38g48 9					yes	FL
641	OR7E37P	H38g49 0			hg533	+		FL
642	OR5AVn	H38g49 1	DS4;DS 6;DS11			+	yes	FL
643	OR2AJnP	H38g49 2						FL
644	OR13EnP	H38g49 3						FL
645	OR2Cn	H38g49 4					yes	FL
646	OR2TnP	H38g49 5						
647	OR2WnP	H38g49 6						
648	OR13Jn	H38g49 7					yes	FL
649	OR6RnP	H38g49 8						FL
650	OR5ATn	H38g49 9					yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
651	OR2Zn	H38g50 0					yes	FL
652	OR4Ln	H38g50 1					yes	FL
653	OR4UnP	H38g50 2						FL
654	OR4Fn	H38g50 3					yes	FL
655	OR4FnP	H38g50 4						FL
656	OR4Fn	H38g50 5					yes	FL
657	OR4Fn	H38g50 6					yes	FL
658	OR4AnP	H38g50 7						FL
659	OR4LnP	H38g50 8						FL
660	OR7E33P	H38g50 9		OST927	hg688			FL
661	OR2Cn	H38g51 0					yes	FL
662	OR4Kn	H38g51 1					yes	FL
663	OR5U1	H38g51 2			bA150A6.4;hs6M1-28		yes	FL
664	OR4Kn	H38g51 3					yes	FL
665	OR5V1	H38g51 4			bA150A6.2;hs6M1-21		yes	FL
666	OR4QnP	H38g51 5						FL
667	OR12D3	H38g51 6			bA150A6.1;hs6M1-27		yes	FL
668	OR4Kn	H38g51 7					yes	FL
669	OR51CnP	H38g51 8						
670	OR1J2	H38g51 9		OST044	hg152		yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
671	OR5BJnP	H38g52 0						
672	OR1J1	H38g52 1	DS130	OST928	hg32	+	yes	FL
673	OR13En	H38g52 2					put	
674	OR4KnP	H38g52 3	DS1			+		FL
675	OR1LnP	H38g52 4						
676	OR2CnP	H38g52 5						
677	OR4TnP	H38g52 6						FL
678	OR5BnP	H38g52 7						
679	OR4Kn	H38g52 8					yes	FL
680	OR11Ln	H38g52 9					yes	FL
681	OR7E68P	H38g53 0		OST929	OR912-108;OR912- 109;OR912-110;OR912- 46;hg523;hg674			FL
682	OR7EnP	H38g53 1						FL
683	OR7E31P	H38g53 2		OST016;O ST205				FL
684	OR7EnP	H38g53 3						FL
685	OR5AKnP	H38g53 4						FL
686	OR5AKn	H38g53 5					yes	FL
687	OR5AKn	H38g53 6					yes	FL
688	OR5BQnP	H38g53 7						
689	OR1Nn	H38g53 8	DS136; DS142			+	yes	FL
690	OR1J4	H38g53 9		OST930	HSHTPCR01	+	yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
691	OR1Nn	H38g54 0					yes	FL
692	OR2AnP	H38g54 1						FL
693	OR2ANnP	H38g54 2						
694	OR5K1	H38g54 3			HSHTPCR10	+	yes	FL
695	OR2K2	H38g54 4			HSHTPCR06		yes	FL
696	OR8Hn	H38g54 5					yes	FL
697	ORnP	H38g54 6						
698	OR4AnP	H38g54 7						
699	OR4An	H38g54 8					yes	FL
700	OR6Sn	H38g54 9					yes	FL
701	OR4RnP	H38g55 0						
702	OR13Cn	H38g55 1					yes	FL
703	OR13DnP	H38g55 2						FL
704	OR7EnP	H38g55 3						FL
705	OR10PnP	H38g55 4						FL
706	OR8In	H38g55 5					yes	FL
707	OR8G1	H38g55 6			HSTPCR25	+	put	
708	ORnP	H38g55 7						
709	OR5F1	H38g55 8			OR11-10		yes	FL
710	OR5FnP	H38g55 9						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
711	OR6BnP	H38g56 0						FL
712	OR2D1	H38g56 1			hg27		put	
713	OR5ASn	H38g56 2					yes	FL
714	OR5SnP	H38g56 3						FL
715	OR5AQnP	H38g56 4						
716	OR6BnP	H38g56 5						FL
717	OR5JnP	H38g56 6						FL
718	OR9AnP	H38g56 7						FL
719	OR5BEnP	H38g56 8						FL
720	OR9An	H38g56 9					yes	FL
721	OR8Hn	H38g57 0					yes	FL
722	OR5BNnP	H38g57 1						
723	OR8Jn	H38g57 2					yes	FL
724	OR9NnP	H38g57 3						
725	OR7EnP	H38g57 4						FL
726	OR7E9P	H38g57 5		OST289				FL
727	OR8KnP	H38g57 6						
728	OR2AnP	H38g57 7						
729	OR8Kn	H38g57 8					yes	FL
730	OR7E39P	H38g57 9		OST931	hg611			

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
731	OR7E27P	H38g58 0		OST932	hg616			
732	OR2Hn	H38g58 1					put	
733	OR13CnP	H38g58 2						FL
734	OR13Cn	H38g58 3					yes	FL
735	OR2S1P	H38g58 4		OST611				FL
736	OR2AMnP	H38g58 5						
737	OR1N1	H38g58 6		OST933	OR1-26		put	
738	OR2S2	H38g58 7		OST715			yes	FL
739	OR7E26P	H38g58 8			OR1-51;OR1-72;OR1-73;OR912-95			
740	OR1F11	H38g58 9			hg91		put	
741	OR5ACnP	H38g59 0						FL
742	OR5B10P	H38g59 1			OR13-34;OR13-64;OR13-67			
743	OR2AnP	H38g59 2						FL
744	OR1E5	H38g59 3	DS117; DS143		OR13-66	+	put	
745	OR4Fn	H38g59 4					yes	FL
746	OR5CnP	H38g59 5						
747	OR2WnP	H38g59 6						
748	OR2L2	H38g59 7			HSHTPCRHO7	+	put	
749	OR4H8P	H38g59 8			OR14-58			
750	OR5D10P	H38g59 9			OR912-94			

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
751	OR7A12P	H38g60 0			OR14-11;OR14-59			
752	OR2L1	H38g60 1			HSHTPCR02	+	put	
753	OR2F3P	H38g60 2			OR14-60		put	
754	OR4H10P	H38g60 3		OST934	OR15-69;OR15- 80;OR15-81			
755	OR5H1	H38g60 4			HSHTPCR14	+	put	
756	OR2K1	H38g60 5			HSHTPCR17	+	put	
757	OR7E11P	H38g60 6			OR11-2			
758	OR7A3P	H38g60 7		OST935	OR11-7b			
759	OR6A1	H38g60 8			OR11-55	+	yes	FL
760	OR5I1	H38g60 9			OLF1	+	yes	FL
761	OR2H3	H38g61 0			HUMORLMHC	+	yes	FL
762	OR10J1	H38g61 1	DS3;DS 14		HSHGMP07J	+	yes	FL
763	OR7E3P	H38g61 2			OR11-9			
764	OR1D6P	H38g61 3			OR11-13;OR11-22			
765	OR5D10P	H38g61 4			OR18-17;OR18- 42;OR18-43;OR18-44			
766	OR5D5P	H38g61 5			OR18-79;OR912-47			
767	OR52A1	H38g61 6			HPFH1OR	+	yes	FL
768	OR2AEn	H38g61 7					yes	FL
769	OR6LnP	H38g61 8						FL
770	OR6LnP	H38g61 9						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
771	OR7MnP	H38g62 0						
772	OR13Cn	H38g62 1					yes	FL
773	OR13Cn	H38g62 2					yes	FL
774	OR2InP	H38g62 3				+		
775	OR4An	H38g62 4					yes	FL
776	OR2InP	H38g62 5				+		
777	OR4AnP	H38g62 6						FL
778	OR4AnP	H38g62 7						FL
779	OR8C1P	H38g62 8			OR11-175			
780	OR4AnP	H38g62 9						FL
781	OR7E15P	H38g63 0			OR11-392			
782	OR10A1	H38g63 2			OR11-403		put	
783	OR2An	H38g63 3				+	put	
784	OR7EnP	H38g63 4				+		FL
785	OR7En	H38g63 5				+	put	
786	OR51A1P	H38g63 6			HPFH6OR	+		FL
787	OR7E47P	H38g63 7			HSORBPL41; bpl41-16	+		FL
788	OR5B5P	H38g63 8			OR3-144; OR912-92			
789	OR1F10	H38g63 9			OR3-145		put	
790	OR8G2	H38g64 0			HSTPCR120	+	put	

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
791	OR1Sn	H38g64 1					yes	FL
792	OR4AnP	H38g64 2						FL
793	OR4AnP	H38g64 3						FL
794	OR4AnP	H38g64 4						FL
795	OR4AnP	H38g64 5						FL
796	OR4AnP	H38g64 6						FL
797	OR4AnP	H38g64 7						FL
798	OR4An	H38g64 8					yes	FL
799	OR4An	H38g64 9					yes	FL
800	OR7E42P	H38g65 0		OST001				
801	OR2M3P	H38g65 1		OST003				
802	OR4H11P	H38g65 2			OR4-114;OR4-115;OR4-119			
803	OR7E57P	H38g65 3		OST007				
804	OR2B1P	H38g65 4			OR5-40;OR5-41		put	
805	OR7E34P	H38g65 5		OST011				
806	OR7E56P	H38g65 6		OST013				
807	OR3AnP	H38g65 7						
808	OR4H5P	H38g65 8			OR5-39;OR5-84			
809	OR1En	H38g65 9	DS47;D S115;D S120;D S121;D S123;D			+	put	

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
			S125					
810	OR51CnP	H38g66 0						
811	OR2WnP	H38g66 1						FL
812	OR51B1P	H38g66 2			AF149710			FL
813	OR7E81P	H38g66 3		OST021				
814	OR7E44P	H38g66 4		OST022				
815	OR5B7P	H38g66 5			OR6-55;OR6-57			
816	OR7E36P	H38g66 6		OST024				
817	OR2A5	H38g66 7			OR7-138;OR7-141		put	
818	OR5B1P	H38g66 8		OST936	OR8-122;OR8-123			
819	OR8B8	H38g66 9			HSTPCR85	+	yes	FL
820	OR8B4P	H38g67 0			AC002556-D		yes	FL
821	ORnP	H38g67 1						FL
822	OR8B3	H38g67 2			AC002556-B		yes	FL
823	OR2Bn	H38g67 3					yes	FL
824	OR8B6P	H38g67 4			AC002556-G			FL
825	OR8B5P	H38g67 5			AC002556-A			FL
826	OR4E2	H38g67 6			AE000658-A		yes	FL
827	OR8B7P	H38g67 7			AC002556-F			FL
828	OR11JnP	H38g67 8						FL
829	OR4E1P	H38g67 9			AE000658			FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
830	OR10DnP	H38g68 0						
831	ORnP	H38g68 1						
832	OR8D2	H38g68 2			AC002556-E		yes	FL
833	OR11InP	H38g68 3						FL
834	OR11JnP	H38g68 4						FL
835	OR10AnP	H38g68 5	DS12;D S65			+		FL
836	OR8C3P	H38g68 6			OR912-106;OR912- 45;pDJ9j14			FL
837	OR2DnP	H38g68 7						FL
838	OR4PnP	H38g68 8						
839	OR7E21P	H38g68 9		OST035	OR4DG			
840	OR2M1	H38g69 0		OST037			put	
841	OR7AnP	H38g69 1						
842	OR5D11P	H38g69 2			OR8-125;OR8-127			
843	OR7E50P	H38g69 3			OR8-126			
844	OR7E45P	H38g69 4		OST049				
845	OR7E77P	H38g69 5		OST060				
846	OR8B2	H38g69 6			AC002556-C		yes	FL
847	OR8D1	H38g69 7		OST004	pDJ9j14		yes	FL
848	OR8B1P	H38g69 8		OST937	OR11-561			FL
849	OR7A1P	H38g69 9		OST938	OLF4p;OR19-3;hg513			FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
850	OR7E8P	H38g70 0			OR11-11a;pDJ392a17			FL
851	OR4DnP	H38g70 1						FL
852	OR7E80P	H38g70 2		OST939	pDJ392a17			FL
853	OR4DnP	H38g70 3						FL
854	OR7E10P	H38g70 4			AC000385-A			FL
855	OR10B1P	H38g70 5			AC003956-A;OR19-19			FL
856	OR2InP	H38g70 6				+		
857	OR4Dn	H38g70 7					yes	FL
858	OR5ACn	H38g70 8					put	
859	OR2I1	H38g70 9			AC004179- A;dJ271M21.7;hs6M1- 14	+		
860	OR10H1	H38g71 0			AC004510	+	yes	FL
861	OR7E59P	H38g71 1		OST119				
862	OR7E28P	H38g71 2		OST128				
863	OR5B3	H38g71 3		OST129			put	
864	OR2A6	H38g71 4		OST182			put	
865	OR6Cn	H38g71 5					put	
866	OR7E54P	H38g71 6		OST185				
867	OR7E48P	H38g71 7		OST193				
868	OR67AnP	H38g71 8						FL
869	OR4DnP	H38g71 9						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
870	OR4CnP	H38g72 0						FL
871	OR4DnP	H38g72 1						FL
872	OR10H2	H38g72 2			AC004597-A	+	yes	FL
873	OR10H3	H38g72 3			AC004597-B	+	yes	FL
874	OR55CnP	H38g72 4						
875	OR55BnP	H38g72 5						
876	OR52VnP	H38g72 6						FL
877	OR2B3	H38g72 7			OR6- 4;dJ80I19.1;hs6M1-1		yes	FL
878	OR52TnP	H38g72 8						FL
879	OR2J1P	H38g72 9			OR6- 5;dJ80I19.2;hs6M1-4			FL
880	OR52HnP	H38g73 0						FL
881	OR2J3	H38g73 1			OR6- 6;dJ80I19.7;hs6M1-3		yes	FL
882	OR52An	H38g73 2				+	put	
883	OR4Qn	H38g73 3					put	
884	OR52BnP	H38g73 4						FL
885	OR2N1P	H38g73 5	DS9		OR6- 7;dJ80I19.3;hs6M1-2	+		FL
886	OR51EnP	H38g73 6				+		
887	OR2J2	H38g73 7			OR6- 8;dJ80I19.4;hs6M1-6		yes	FL
888	OR2In	H38g73 8				+	put	
889	OR2J4P	H38g73 9			OR6- 9;dJ80I19.5;hs6M1-5			FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
890	OR7E40P	H38g74 0		OST215				
891	OR2H4P	H38g74 1			OR6- 3;dJ80I19.6;hs6M1-7			FL
892	OR7E52P	H38g74 2		OST245				
893	OR2InP	H38g74 3				+		
894	OR6C1	H38g74 4		OST267			put	
895	OR7E30P	H38g74 5		OST339				
896	OR5BAnP	H38g74 6	DS132			+		
897	OR7H1P	H38g74 7		OST940	CIT-B-440L2			FL
898	OR5B2	H38g74 8		OST073			yes	FL
899	OR5AZnP	H38g74 9						FL
900	OR5Bn	H38g75 0					yes	FL
901	OR52Bn	H38g75 1					yes	FL
902	OR5BnP	H38g75 2						FL
903	OR52Dn	H38g75 3					yes	FL
904	OR7A11	H38g75 4		OST527	CIT-HSP-87m17			FL
905	OR5BnP	H38g75 5						FL
906	OR51AnP	H38g75 6						FL
907	OR7A15P	H38g75 7		OST941	CIT-HSP-87m17;OR19- 1;OR19-134;OR19-146			FL
908	OR7C2	H38g75 8			CIT-HSP-87m17;OR19- 18		yes	FL
909	OR7E23P	H38g75 9		OST942	OR21-3			FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
910	OR2E1	H38g76 0			HS29K1;HSNH0569I24;h s6M1-9			
911	OR1I1	H38g76 1			F20569;OR19-20		yes	FL
912	OR1RnP	H38g76 2						FL
913	OR4F3	H38g76 3			AC004908		yes	FL
914	OR2AEn	H38g76 4					yes	FL
915	OR2InP	H38g76 5				+		
916	OR52AnP	H38g76 6				+		
917	OR7C1	H38g76 7		OST943	CIT-HSP-146e8;OR19- 5;TPCR86	+	yes	FL
918	OR2A3P	H38g76 8			AC004889-B			FL
919	OR7A5	H38g76 9	DS8;DS 19;DS6 1;DS68 ;DS112	OST944	HTPCR2	+	yes	FL
920	OR2InP	H38g77 0	DS72			+		
921	OR7A10	H38g77 1		OST027	CIT-HSP-146e8		yes	FL
922	OR2An	H38g77 2				+	put	
923	OR2M2	H38g77 3		OST423			put	
924	OR7A8P	H38g77 4		OST042	OR19-11;hg83			FL
925	OR2An	H38g77 5				+	put	
926	OR7E20P	H38g77 6		OST516				
927	OR2AnP	H38g77 7				+		
928	OR5BHnP	H38g77 8				+		
929	OR1En	H38g77					put	

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
		9						
930	OR1EnP	H38g78 0						
931	OR5Bn	H38g78 1					yes	FL
932	OR8RnP	H38g78 2						
933	OR5ANn	H38g78 3					yes	FL
934	OR5ANnP	H38g78 4						FL
935	OR5BRnP	H38g78 5						FL
936	OR2A1	H38g78 6			AC004889-A	+	yes	FL
937	OR10An	H38g78 7					yes	FL
938	OR2A9	H38g78 8	DS149		HSDJ0798C17	+		FL
939	OR2A7	H38g78 9			HSDJ0798C17	+	yes	FL
940	OR10A3	H38g79 0			HSHTPCR12	+	yes	FL
941	OR10Cn	H38g79 1					yes	FL
942	OR7A2P	H38g79 2			OLF4p;OR19-18;hg1003		yes	FL
943	OR10WnP	H38g79 3						FL
944	OR7A17	H38g79 4			HSHTPCR19		yes	FL
945	OR5Bn	H38g79 5					yes	FL
946	OR5BnP	H38g79 6						FL
947	OR1Q1	H38g79 7		OST226	HSTPCR106;OR9- A;hrPK-465_F_21	+	yes	FL
948	OR2Hn	H38g79 8	DS133; DS144; DS150			+	yes	FL
949	OR7EnP	H38g79						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
		9						
950	OR7A14	H38g80 0		OST945	OR19-12			
951	OR1B1	H38g80 1			OR9-B;hRPK-465_F_21		yes	FL
952	OR12D2	H38g80 2			AC004171;dJ994E9.8;h s6M1-20	+	yes	FL
953	OR7EnP	H38g80 3						FL
954	OR8BnP	H38g80 4						FL
955	OR1L1	H38g80 5			OR9-C;hRPK- 465_F_21;hg23		yes	FL
956	OR11An	H38g80 6					yes	FL
957	OR7AnP	H38g80 7						
958	OR1C1	H38g80 8			HSTPCR27	+	yes	FL
959	OR1D2	H38g80 9		OST946	OR17-4	+	yes	FL
960	OR1L3	H38g81 0			OR9-D;hRPK-465_F_21		yes	FL
961	OR12DnP	H38g81 1						FL
962	OR4G1P	H38g81 2			OLB			FL
963	OR2B4P	H38g81 3			AL050339- A;dJ974I11.1;hs6M1- 22			
964	OR11H1	H38g81 4			OR22-1		yes	FL
965	OR4Fn	H38g81 5					yes	FL
966	OR56AnP	H38g81 6						FL
967	OR8NnP	H38g81 7						FL
968	OR7EnP	H38g81 8						
969	OR4Pn	H38g81					yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
		9						
970	OR6Cn	H38g82 0					put	
971	OR5BCnP	H38g82 1						
972	OR10QnP	H38g82 2	DS64			+		FL
973	OR5BnP	H38g82 3						FL
974	OR10PnP	H38g82 4						FL
975	OR1L4	H38g82 5		OST046	OR9-E;hRPK-465_F_21		yes	FL
976	OR2APnP	H38g82 6						
977	OR1L6	H38g82 7		OST947	HShRPK-465_F_21;hg16		yes	FL
978	OR6UnP	H38g82 8						FL
979	OR5C1	H38g82 9			OR9-F;hRPK-465_F_21		yes	FL
980	OR11InP	H38g83 0						FL
981	OR4AnP	H38g83 1						FL
982	OR4GnP	H38g83 2						FL
983	OR10Vn	H38g83 3					yes	FL
984	OR4G2P	H38g83 4			HS14a-1-B			FL
985	OR10VnP	H38g83 5				+		
986	OR4F4	H38g83 6			HS14a-1-A		yes	FL
987	OR4G3P	H38g83 7			OLC-7501			FL
988	OR5AKnP	H38g83 8						FL
989	OR10YnP	H38g83 9						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
990	OR4GnP	H38g84 0						FL
991	ORnP	H38g84 1						
992	OR4Fn	H38g84 2					yes	FL
993	OR8A1	H38g84 3		OST025			yes	FL
994	OR8Bn	H38g84 4					yes	FL
995	OR6DnP	H38g84 5						
996	OR7E14P	H38g84 6		OST948	OR11-5	+		FL
997	OR2M4	H38g84 7		OST710	HSHTPCRX18	+	put	
998	OR4WnP	H38g84 8						
999	OR4Fn	H38g84 9	DS36			+	yes	FL
1000	OR7EnP	H38g85 0						
1001	OR4GnP	H38g85 1						FL
1002	OR10JnP	H38g85 2						
1003	OR52En	H38g85 3					yes	FL
1004	OR4RnP	H38g85 4						FL
1005	OR4Cn	H38g85 5					yes	FL
1006	OR4AnP	H38g85 6						
1007	OR4AnP	H38g85 7	DS54			+		
1008	OR4AnP	H38g85 8						FL
1009	OR9Gn	H38g85 9					yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
1010	OR10An	H38g86 0					yes	FL
1011	OR4Cn	H38g86 1					yes	FL
1012	OR10VnP	H38g86 2						
1013	OR10UnP	H38g86 3						FL
1014	OR7E2P	H38g86 4	DS127		OR11-6;hg94	+		FL
1015	OR7E35P	H38g86 5		OST018				FL
1016	OR9KnP	H38g86 6						
1017	OR7E13P	H38g86 7		OST949	OR11-4			FL
1018	OR7EnP	H38g86 8						FL
1019	OR9Kn	H38g86 9					yes	FL
1020	ORnP	H38g87 0						FL
1021	OR7EnP	H38g87 1		OST950	OR11-1;hg500	+		FL
1022	OR7EnP	H38g87 2						FL
1023	OR3A4P	H38g87 3		OST951	OR17-24;OR17-25	+	yes	FL
1024	OR8QnP	H38g87 4						
1025	OR7EnP	H38g87 5						FL
1026	OR7EnP	H38g87 6						FL
1027	OR3A1	H38g87 7	DS2		OLFRA03;OR17- 40;hg138	+	yes	FL
1028	OR5Gn	H38g87 8					yes	FL
1029	OR5MnP	H38g87 9						

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
1030	OR7EnP	H38g88 0						FL
1031	OR5G1P	H38g88 1		OST952	OR11- 104;OR93;OR93Hum			FL
1032	OR5PnP	H38g88 2						FL
1033	OR10AEn P	H38g88 3						
1034	OR3A2	H38g88 4		OST953	OR17-228	+	yes	FL
1035	OR10Jn	H38g88 5					yes	FL
1036	OR1D3P	H38g88 6		OST954	OR17-23			FL
1037	OR10Jn	H38g88 7					yes	FL
1038	OR1D4	H38g88 8			OR17-30	+	yes	FL
1039	OR5GnP	H38g88 9						FL
1040	OR4SnP	H38g89 0						FL
1041	OR5GnP	H38g89 1						FL
1042	OR9HnP	H38g89 2						FL
1043	OR1A1	H38g89 3			OR17-7	+	yes	FL
1044	OR1A2	H38g89 4			OR17-6	+	yes	FL
1045	OR8AnP	H38g89 5						FL
1046	OR1P1P	H38g89 6			OR17-208	+		FL
1047	OR7E12P	H38g89 7		OST955	AC000378-A;OR11- 3;hg1058	+		FL
1048	OR4A1P	H38g89 8			OR11-30			FL
1049	OR10G3	H38g89 9			AE000658-D		yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
1050	OR10G1P	H38g90 0			AE000658-C			FL
1051	OR10G2	H38g90 1			AE000658-B		yes	FL
1052	OR5Tn	H38g90 2					yes	FL
1053	OR7EnP	H38g90 3						FL
1054	OR7EnP	H38g90 4						FL
1055	OR4AnP	H38g90 5						FL
1056	OR4C1	H38g90 6			HSHTPCR11	+		FL
1057	OR1EnP	H38g90 7						
1058	OR7KnP	H38g90 8						FL
1059	OR4CnP	H38g90 9						FL
1060	OR1RnP	H38g91 0						FL
1061	OR5AUn	H38g91 1					yes	FL
1062	OR4Cn	H38g91 2					yes	FL
1063	OR4Cn	H38g91 3					yes	FL
1064	OR13DnP	H38g91 4						FL
1065	OR5n	H38g91 5	DSU116			+		
1066	OR2Hn	H38g91 6	DSU150			+		
1067	ORn	H38g91 7	DSU151			+	put	
1068	ORn	H38g91 8	DSU17			+		
1069	ORn	H38g91 9	DSU18			+		

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
1070	ORn	H38g92 0	DSU35			+		
1071	OR6Fn	H38g92 1	DSU41			+		
1072	ORn	H38g92 2	DSU49			+		
1073	ORn	H38g92 3	DSU50			+		
1074	OR10An	H38g92 4	DSU57			+		
1075	ORn	H38g92 5	DSU58			+		
1076	OR2Ln	H38g92 6	DSU59			+		
1077	OR10Jn	H38g92 7	DSU60			+		
1078	OR1Kn	H38g92 8	DSU63			+		
1079	OR10Dn	H38g92 9	DSU7			+		
1080	ORn	H38g93 0	DSU32			+		
1081	OR2Ln	H38g93 1	DSU38			+		
1082	ORn	H38g93 2	DSU62			+		
1083	ORn	H38g93 3	DSU48			+		
1084	OR2n	H38g93 4	DSU111			+		

Table 2

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SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
153	OR10D3	0	11	137.96SDVISV	69	M	AC074177.4	12106 ... 13038
154	OR7EnP	4	4	11.58	MVACGVLDLHIIDSFAL	53	R	AF091580.1	7 ... 663
155	OR1D5	0	17	3.75	LVVTNLLYLLLLTGIFT	49	M	AF073967.1	2 ... 649

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
156	OR10Nn P	4	11	138.02	LQGSGVVHILFGNVLAT	82	M	AC074177.4	159287 ... 158526
157	OR2F1	0	7	148.62	LLGGFTSSVQIISLLT	56	M	AF073974.1	41 ... 649
158	OR7EnP	7	4	11.58	MAGGELLDLHILPALGL	54	M	AF073989.1	547 ... 1515
159	OR8FnP	6	11	137.96	LLVICEMGAHCVCSNIF	75	M	AC069561.1 0	51687 ... 50743
160	OR2Q1P	2	7	148.62	LLCGFSANMEIVSGVIL	49	M	AC020865.3	190954 ... 189954
161	OR2W1	0	6	33.74	LMGSCMINVLLVLGIVT	88	M	AF102516.1	52 ... 669
162	OR7EnP	7	4	11.58	MVACGVLDLHITHSFGL	53	R	AF091580.1	7 ... 663
163	OR6B1	0	7	148.62	LIMCCGIIAKFDLAIFF	61	M	NM_010983. 1	178 ... 975
164	OR10Kn	0	1	154.34	MLGSSACVVTILGALI	79	M	AC073778.1	168744 ... 167803
165	ORnP	13	11	138.02	VPYCIGGHLICLSLSS	33	M	AC074177.4	12106 ... 13038
166	OR4F2P	4	6	186.49	IHGGMVLHFQFVNSICG	50	M	AB030896.1	1 ... 906
167	OR7EnP	3	4	11.58	MVACGVLDLHIIDSFGL	54	M	AF102536.1	22 ... 669
168	OR1F2P	0	16	6.15	MSADNGVNHLHIEAVTT	72	R	M64377.1	1 ... 939
169	OR2P1P	7	6	33.74	FGGSCMSNQSALVRXSV	48	M	NM_008762. 1	1 ... 936
170	OR7E43 P	5	4	5.57	MAGGELFDLHIMPAFGL	54	M	AF102536.1	22 ... 669
171	OR4F1	4	6	0.23	IHGGMVLHFQFVNSICG	50	M	AB030896.1	1 ... 906
172	OR7E55 P	5	3	89.94	MAGDEFDLHILPAFGL	53	M	AF073989.1	547 ... 1515
173	OR13Dn	0	9	86.89	MLGSCWITLQLMTNSLI	61	M	AC023789.5	371264 ... 372220
174	OR4CnP	3	16		AHGAIVGHIQFVNSICL	74	M	AF102522.1	40 ... 660
175	OR10D1 P	1	11	137.96	LHGCCGFQFLLGSVMPS	83	M	AC074177.4	128803 ... 129726
176	OR4Cn	0	16		LHGGIVGHVQLVNSICL	86	M	AB030895.1	1 ... 924

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
177	OR8GnP	0	11	137.96	LSAICGLGIHFVLSNIM	73	M	AC074177.4	106297 ... 105361
178	OR13CnP	2	9	86.85	MFGACGGNLQLMASFLG	82	M	AJ251154.1	2703 ... 1747
179	OR4CnP	5	16		LHEAIVLHIQFINSCL	61	M	AF102522.1	40 ... 660
180	OR13Cn	0	9	86.81	MLGTCGINVQFMATFIT	69	M	AJ133425.1	61 ... 1014
181	OR4CnP	0	16		LHGGIMGHIQLVNSMCL	63	M	AB030895.1	1 ... 924
182	OR51Bn	0	11		AHSVSGRSPVRPLITIL	76	M	AF071080.2	15931 ... 16851
183	OR7E5P	2	11	51.76	MVACDVLDLHIIDSFGL	54	M	AF073989.1	547 ... 1515
184	OR13Cn	0	9	86.77	MFGSCVSNVQLMSNFL	71	M	AJ251154.1	2703 ... 1747
185	OR4Sn	0	16		LHGGIAAHLQLVNSISA	56	M	AB030895.1	1 ... 924
186	OR51BnP	4	11		VHYPEWRSPPPPLVIFL	72	M	AF071080.2	15931 ... 16851
187	OR6JnP	1	14	2.72	CFGTFFGSFPLDLSVIC	50	R	M64378.1	1 ... 933
188	OR51Bn	0	11		SHAISGRSPISPQTTVL	76	M	AF071080.2	26330 ... 27262
189	OR7EnP	2	11	71.8	MFACGVLDLHIIDSFGL	55	M	AF102536.1	22 ... 669
190	OR2An	0	6	144.32	TSAVCTTLIHLVGAGLG	81	M	L14566.1	62 ... 667
191	OR7E22P	3	3	89.94	MVACDVLDLHIIDSFGL	56	M	AF073989.1	547 ... 1515
192	OR7E4P	2	11	71.8	IVACDVLDLHIMHSFGL	55	M	AF102536.1	22 ... 669
193	OR7E66P	9	3	89.94	MAGGELLFLHIMPAFGL	55	M	AF073989.1	547 ... 1515
194	OR6Mn	0	11	138.18	TFGTFGGSFVNLSVIS	50	M	NM_010991.1	1 ... 939
195	OR2ALnP	11	11	112.69	ILGTCASNFDFFNHLLL	32	M	AL359352.1	85325 ... 86251
196	OR6MnP	2	11	138.18	TGGTFGGSCPVNLSILT	50	M	NM_010991.1	1 ... 939
197	OR4D1	0	17	60.7	IHGGVAGHVQLMNSLVI	90	M	AC019272.4	62255 ... 61317
198	OR5D2P	3	11	51.09	LCVVTTWCTLFTSANES	48	M	AC073947.3	29192 ... 30115

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
199	OR7E38P	7	7	95.91	MAGGELFHLHIMPAFGL	55	R	AF091580.1	7 ... 663
200	OR4D2	0	17	60.7	IHGGVAGHVQLKNSLDV	89	M	AC019272.4	183633 ... 182701
201	OR7E7P	4	7	95.91	MIACGVLDLHIIDSFGL	56	R	AF091580.1	7 ... 663
202	OR5AHnP	0	19	68.97	.....RSGIMC	77	M	AC020957.2	48184 ... 49107
203	OR2U2P	5	6	33.53	LVYSCIVNIPYTMCIIV	49	M	AC044846.2	105668 ... 104736
204	OR2U1P	2	6	33.53	LVCTCMINILCCVVIFA	54	M	AF102516.1	52 ... 669
205	OR2H2	0	6	33.19	ILGTCVIEVQSVASILV	89	M	AL078630.1	41097 ... 40165
206	OR2H5P	7	6	33.19	FLGTCVIEVQSMASILV	84	M	AL078630.1	41097 ... 40165
207	OR2In	0	6	33.19	LLGSCASNAQLMARILL	74	M	AL078630.1	151152 ... 150391
208	OR11HnP	5	13		IFNTCLCWIPCLSVIG	60	M	AF121972.1	171 ... 1109
209	OR7EnP	6			AAACDVIDLHITHSFGL	56	M	AF073964.1	41 ... 649
210	OR9In	0	11	54.06	FTAGCGCGLRCIFGVIA	50	R	AF091579.1	7 ... 663
211	OR2AFnP	11	X	140.17	MLGTCGHVTLAGISTLL	43	R	L34074.1	73 ... 1011
212	OR13KnP	5	X	140.17	MFGMCVIIHILGIGTLL	43	R	L34074.1	73 ... 1011
213	OR13Cn	0	9	86.77	MFGSCVSNVQLLSNFL	68	M	AJ251154.1	2703 ... 1747
214	OR13Fn	0	9	86.77	MLGSCGTTVESMISLLM	55	M	AJ133428.1	61 ... 1017
215	OR9Qn	0	11	54.08	FTGSCGASVRSIFAVIA	47	M	AF146372.1	509 ... 1456
216	OR2TnP	1	1	254.77	ILIGFGGDMLVMCCMLI	71	M	AF102527.1	22 ... 669
217	OR4Kn	0	14	0.08	IHVGMIVHSHFTNSISS	56	M	AF259072.1	104176 ... 105099
218	OR2B8P	0	6	31.6	LLGSCTINLQLLVSILV	62	R	L34074.1	73 ... 1011

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
219	OR2Tn	0	1	254.77	MLAGVALDLLITCCMLT	57	M	AF102527.1	22 ... 669
220	OR4Kn	0	14	0.08	IHTGIAMHSQFMTSIAS	53	M	AF259072.1	104176 ... 105099
221	OR2A4	0	6	144.76	TSAVCTTLIHLVGAGLG	81	M	L14566.1	62 ... 667
222	OR7EnP	6	2	161.53	MVACDVLDLHIIDSFGL	54	R	AF091580.1	7 ... 663
223	OR4Kn	0	14	0.08	MHGGILVHSQFMTSIIV	57	M	AF259072.1	104176 ... 105099
224	OR13InP	6	9	86.85	MYGSCVLNNVIGKTLL	41	M	AJ251155.1	15491 ... 16423
225	OR7EnP	8	2	161.53	MVACDVLDLHIFFDFGL	54	M	AF073989.1	547 ... 1515
226	OR6Jn	0	14	2.72	CFGTFFGSFPLDSVIC	50	R	M64378.1	1 ... 933
227	OR4Mn	0	14	0.08	LHGAMLGHIQLMSSISV	54	M	AC019272.4	183633 ... 182701
228	OR4VnP	10	11	51.09	IHGIIVLHFQMVNSFAV	50	M	AB030896.1	1 ... 906
229	OR6Xn	0	11	138.36	AFGTFSVICQLGATVIG	46	M	AF106007.1	178 ... 975
230	OR51Gn	0	11	3.7	LHSSSSRLPLLGVVTVV	55	M	NM_013617.1	1 ... 921
231	OR6EnP	3	14	2.72	SFGTFCTLIPLGIASLG	82	M	NM_010991.1	1 ... 939
232	OR4NnP	2	14	0.08	LHGGGAGHIQLMNSMTL	54	M	AC019272.4	62255 ... 61317
233	OR6MnP	7	11	138.18	IFGTFGGARLVXSMTV	37	R	M64378.1	1 ... 933
234	OR4Nn	0	14	0.08	LHGGGAGHIQLMNSMTL	57	M	AC019272.4	62255 ... 61317
235	OR4Cn	0	11	51.09	LHGGIGGHIQFVNSMCA	65	M	AF102522.1	40 ... 660
236	OR4KnP	4	14	0.08	IHAGMGTHSQFMDSMGT	51	M	AF259072.1	104176 ... 105099
237	ORnP	8	11	137.59	AIAITVVVAHAAAGVVA	35	M	AC069559.8	73704 ... 74636
238	OR5D3	0	11	51.15	FCVVTAWCTYFISANES	46	R	U50948.1	34 ... 978
239	OR2G1P	6	6	33.53	LLGSCVSNIQVLASLLL	84	M	AL359352.1	85325 ... 86251

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
240	OR4Kn	0	14	0.08	IHTGMIVHSQFINSLS	51	M	AF259072.1	104176 ... 105099
241	OR8BnP	2	11	137.59	LCVFSGMGAHNVIVGIV	68	M	AC069559.8	120212 ... 119283
242	OR2B2	0	6	31.47	LLGSCASNQWLISFLI	89	R	L34074.1	73 ... 1011
243	OR7EnP	3	2	73.87	MVACDVLRLRIIDSFGL	54	M	AF073989.1	547 ... 1515
244	OR4KnP	3	14	0.08	IHTGIVVHSQFMTSIAI	57	M	AB030896.1	1 ... 906
245	OR2AD1P	6	6	33.87	FLGACTSSIVLVFGFLV	51	M	AL136158.1 4	162423 ... 161461
246	OR1AAnP	8	X	140.17	MIVDNTIVLHLIIGVII	48	M	AC068902.1 1	144125 ... 143193
247	OR1E3P	1	17	2.99	MLGVSLHLHLMMGILI	74	R	M64392.1	1 ... 942
248	OR8BnP	3	11	137.59	FCVFSGMGAHNVIVGIV	63	M	AC069561.1 0	96653 ... 95690
249	OR5Hn	0	3	104.18	FAGTCFGHIHLVLSIQF	55	R	AF091575.1	52 ... 663
250	OR1G1	0	17	2.99	LMVMAAMHLHLITGTGI	56	R	M64392.1	1 ... 942
251	OR5HnP	2	3	104.18	FAVTCGGHIHFVFSIQF	46	M	AC068904.1 5	165039 ... 165965
252	ORnP	5	X	140.17	MLVTCSHHFLSFTGIWS	36	R	U50948.1	34 ... 978
253	ORnP	11	X	140.17	LIVTFAKITTTQDHHHH	29	M	AC069561.1 0	127636 ... 126698
254	OR4PnP	2	11	51.09	LHGDIAGHSQVLNSISL	51	M	AB030895.1	1 ... 924
255	OR13Hn	0	X	140.17	TLATCTTVAMLITSTLL	47	M	AJ251154.1	35662 ... 36615
256	OR7D1P	5	19	11.38	VMAGTAIFVHLLATLGF	64	R	AF091580.1	7 ... 663
257	OR4KnP	2	18	47.77	IHNIGIVVHSQFMTSIAI	55	M	AB030896.1	1 ... 906
258	OR7E24	1	19	11.38	MVACDLIDLHIIMGFGL	60	R	AF091580.1	7 ... 663
259	OR51NnP	2	11	3.6	LHGFSARSPSLGVLVTV	49	R	AF079864.1	632 ... 1576
260	OR7E18P	6	19	11.38	VAGCDLLDLHIMLAFGL	59	M	AF102536.1	22 ... 669

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
261	OR7E19P	2	19	11.38	MYVCDVLNLHIMDSFGL	58	M	AF073989.1	547 ... 1515
262	OR7E41P	7	11	14.36	IVVCDMLDLHIHSTFGL	55	M	AF073989.1	547 ... 1515
263	OR2R1	3	7	148.69	LLGGFVVNMELISSVLV	77	M	AF073974.1	41 ... 649
264	OR10ACnP	7	7	148.69	MVGCGRVGLLLACL	46	M	AC073778.1	168744 ... 167803
265	OR51Ln	0	11	3.79	LHTFSARVPTLGVVTLV	54	R	AF079864.1	632 ... 1576
266	OR52JnP	3	11	3.79	MHTGSSRLPILGVALDA	57	M	AF121979.1	53 ... 1106
267	OR9LnP	9	8	45.22	TVVNNFFFFFFFIFDLIA	37	M	AC069561.1 0	147203 ... 146274
268	OR51PnP	4	11	3.79	MHSISARLPALGVVSM	48	M	AF071080.2	2641 ... 1697
269	OR5HnP	4	3	104.18	FAVTCLGHIHFFFSIQ	50	R	AF091575.1	52 ... 663
270	OR51An	0	11	3.79	EHSVSVKLPFTYFGCLV	48	R	AF079864.1	632 ... 1576
271	OR5HnP	6	3	104.18	FAVTCLGHIHFVFSIQ	46	M	AC068904.1 5	165039 ... 165965
272	ORnP	11	17	17.43	LLPCILSIIALYYYYY	27	M	AL359352.1	9138 ... 8177
273	OR52En	0	11	3.79	MHTGSARFPFFYCAILF	57	M	AF121979.1	53 ... 1106
274	OR5Hn	0	3	104.18	FVVTCLGHIHFVFAVQ	53	R	AF091575.1	52 ... 663
275	OR4CnP	3	11	50.21	VHRGVVGHIQFVNSICL	73	M	AF102522.1	40 ... 660
276	OR52En	0	11	3.79	MHTLSGRFPSLYCANLF	60	M	AF121979.1	53 ... 1106
277	OR10Dn	0	11	138	LHGCGGIHILLGNVLSI	86	M	AC074177.4	12106 ... 13038
278	OR5HnP	2	3	104.18	FVVTCLGHIHFVFAIQ	54	R	AF091575.1	52 ... 663
279	OR13An	0	10	47.91	LTASLALNIHLIADYGV	67	M	AF102520.1	16 ... 669
280	OR5HnP	2	3	104.18	FGGTCLGHIHILLSIQ	57	R	AF091575.1	52 ... 663

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
281	OR5Kn	0	3	104.47	FCETCGAHIHLFSVQF	45	M	AC069559.8	36251 ... 35322
282	OR7EnP	9	21	17.99	MAGGELFHLQIMPAFGL	57	M	AF073989.1	547 ... 1515
283	OR4DnP	6	8	77.48	IHGGVAGHVQVMNSLVI	87	M	AC019272.4	62255 ... 61317
284	OR2ARn P	0	3	30.89	MLGSC.....	71	M	AJ251154.1	56533 ... 57369
285	OR7E29 P	4	3	136.03	MAGGELLDLHIMPAFGL	56	M	AF073989.1	547 ... 1515
286	OR4CnP	3	11	51.12	AHGAIVGHIQFVNSICL	74	M	AF102522.1	40 ... 660
287	OR5PnP	2	11	6.93	LVGTCVGNTFCPSSIIV	74	M	AF121977.1	262 ... 1197
288	OR7EnP	5	3	136.04	MVACGVLDLHIIGSFGL	52	R	AF091580.1	7 ... 663
289	OR56An	0	11	4.73	MNLPSFRLPILQAGLLS	41	M	AF121975.1	50 ... 1012
290	OR56An P	9	11	4.73	KNQAFFRMPILQGGLLS	73	M	AF121981.1	89 ... 475
291	OR5Pn	0	11	6.89	LAATCVAISYSLSSIIV	63	M	AF121977.1	262 ... 1197
292	OR7E53 P	5	3	136.04	MAGGEFPDLHIMPAFGL	54	M	AF073989.1	547 ... 1515
293	OR5Pn	0	11	6.89	LVGTCMGNTFCPSSIIA	83	M	AF121977.1	262 ... 1197
294	OR52Ln	0	11	4.73	MHSSSVRLPFLGMAVIL	59	M	AF121976.2	474 ... 1307
295	OR5E1	3	11	6.89	LGATXGYNIQLLFSNLG	51	R	U50948.1	34 ... 978
296	OR56An P	3	11	4.73	MNLASFRMAILPPPPPP	39	M	AF121976.2	474 ... 1307
297	OR4KnP	2	8	88.25	IHTGMIVHSQFIDS...	57	M	AB030896.1	1 ... 906
298	OR52Ln	0	11	4.73	MHSSSVRLPFLGVAVVL	59	M	AF121976.2	474 ... 1307
299	OR7EnP	1	4	74.82	MVF.....	55	R	AF091580.1	7 ... 663
300	OR52Xn P	5	11	4.73	MHSASLXLSFLAVALGG	51	M	AF121976.2	474 ... 1307
301	ORnP	13	4	74.82	STGCKGRKXLKLVRDFQ	24	R	M64386.1	130 ... 975
302	OR56An	0	11	4.73	MNLTSFRVPVLQAGLLS	84	M	AF121981.1	89 ... 475

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
303	OR56An P	10	11	4.73	LI...GMMXNL...KKK	60	M	AF121981.1	89 ... 475
304	OR1R1P	5	17	3	MVGISAVHLHLIEGVVA	48	M	AF073967.1	2 ... 649
305	OR52En P	2	11	3.79	MHTGSGRSPFLYGAILF	64	M	AF121979.1	53 ... 1106
306	OR51An P	4	11	3.7	EHTVALKLPLLGA GSTL	46	R	AF079864.1	632 ... 1576
307	OR51An	0	11	3.7	EHSVSVKLPFTYFGCLV	48	R	AF079864.1	632 ... 1576
308	OR4CnP	1	11	51.12	VHGGVVGHVQFVNSICL	75	M	AF102522.1	40 ... 660
309	OR52Jn P	9	11	3.79	MHTGACRFPILGVVYLN	58	M	AF121979.1	53 ... 1106
310	OR4RnP	9	11	51.12	.....GGGVXSVNGNYL	66	M	AF102522.1	40 ... 660
311	OR52Jn	0	11	3.79	MHTGACRLPMLGVVFN	58	M	AF121976.2	474 ... 1307
312	OR4CnP	3	11	51.12	VHGGGVGHIQFINSICL	76	M	AF102522.1	40 ... 660
313	OR51An P	2	11	3.79	EHSASAKLPFTYFVTGL	83	M	AF121985.1	2 ... 478
314	OR7EnP	15	12	93.55	IVVCDLLDLHIHSTFGL	55	M	AF073989.1	547 ... 1515
315	OR5MnP	2	11	52.17	CIVLHVYLMERMVASNQ	54	M	AF102528.1	52 ... 669
316	OR10AB nP	1	11	6.93	MLASCAVFCITILSVLG	47	M	AC073778.1	168744 ... 167803
317	OR52Sn P	2	11	3.79	MHSTSARLPHLSVATGV	54	M	AF121976.2	474 ... 1307
318	OR5Mn	0	11	52.14	CIVHIFYTAAWMLANFY	49	R	AF091579.1	7 ... 663
319	OR10Sn	0	11	138.1	LHASCIIHIHLMSIVAG	61	M	AF259072.1	32953 ... 32000
320	OR5MnP	4	11	52.14	CIVHIFYTTAWMLANFY	48	R	AF091579.1	7 ... 663
321	OR10Gn	0	11	138.1	LHGSCGSHVQLIDIVAG	61	M	AF259072.1	55611 ... 54658
322	ORnP	20	11	29.15	ILGIYEGSAHYFIILFL	33	M	AL365337.1	192661 ... 191711
323	OR5MnP	2	11	52.19	CIVIIYGYSMEWMVANLS	54	M	AF102528.1	52 ... 669

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
324	OR10Gn P	10	11	138.1	LYGSCWGHLPYIVIKFT	30	M	L14567.1	17 ... 667
325	OR10Tn P	1	1	154.34	LVACCACTIVLILSVLV	57	M	X92969.1	8035 ... 8961
326	ORnP	16	11	52.17	LAAPLLLVLVLAaaaaa	33	R	M64376.1	1 ... 999
327	OR10Rn P	11	1	154.5	MLAVFTICVFLIGGALV	47	M	AC023611.2	108224 ... 107271
328	OR5MnP	2	11	52.16	CIVHLVYTMWVMANFY	49	R	AF091579.1	7 ... 663
329	OR7EnP	4	8	6.68	MLACGVLDLHIIDSFGL	55	M	AF102536.1	22 ... 669
330	OR10Tn	0	1	154.27	LLACCLTIVALLLSVIV	58	M	AC012302.5	54283 ... 55224
331	OR1E1	0	17	3.04	MLGDSLLHLHLIMGILI	83	R	Y07557.1	1 ... 942
332	OR5BKn P	4	12	42.11	STGGAIAIMDFLSQWGL	46	M	AF073965.1	2 ... 643
333	OR5MnP	3	11	52.17	CIVHIVYTMWVMANLF	48	R	AF091579.1	7 ... 663
334	OR3A3	0	17	3.06	LHAGCACNTHALAAMAA	49	M	AF073967.1	2 ... 649
335	OR10AD nP	1	12	42.11	TFGVCTFNFLIIDAIVS	44	M	AF247657.1	1 ... 945
336	OR10Rn	0	1	154.5	MLAICAGATVLCIGVLV	56	M	AC073778.1	168744 ... 167803
337	OR5TnP	4	11	51.94	MCGTCAAHIAFFVIEV	51	M	AF121977.1	262 ... 1197
338	OR4GnP	15	7	0.23	ICRKMAVHSQFVNSISA	42	M	AB030892.1	1 ... 939
339	OR6Yn	0	1	154.5	LVVCYGCTIKFDLAVII	61	M	NM_010983.1	178 ... 975
340	OR1E2	0	17	3.15	MLSDSLLHLHLIMGILI	80	R	Y07557.1	1 ... 942
341	OR8Hn	0	11	51.94	MVGACGINVNWILATLV	51	M	NM_013728.1	1 ... 948
342	OR4Fn	0	7	0.23	IHGGMVIHSQFVNSLTC	50	M	AC019272.4	62255 ... 61317
343	OR10Kn	0	1	154.27	MLGCSACVIILICVLI	83	M	AC073778.1	168744 ... 167803
344	OR7LnP	11	X	140.17	MLGVCGHGTNLXFFFFI	32	M	AL133160.1	63932 ... 64759
345	OR8InP	7	11	51.94	MVCCMINVSVSLATLG	44	R	M64386.1	130 ... 975

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
346	OR10Rn P	0	1	154.5	MLAVCTSIVGFIFGVLV	54	M	AC073778.1	168744 ... 167803
347	OR2AFn P	11	X	140.17	MLGTCGHVTLAGISTLL	43	R	L34074.1	73 ... 1011
348	OR8Kn	0	11	51.94	LEIILVYVFLKIFSNLF	55	M	AF102528.1	52 ... 669
349	ORnP	7	10	127.57	S.CCCLLTYYIIHHHHHH	31	M	AC020958.1	164590 ... 163746
350	OR8KnP	10	11	51.94	MIILIIYQMVKIFSNLF	35	M	AC073945.4	152209 ... 153150
351	OR51Hn	0	11	3.6	MHGISSRVFVLGVVTL	49	R	AF079864.1	632 ... 1576
352	OR7EnP	5	3	136.03	MVACGVLDLHIIDSFGL	51	M	AF073989.1	547 ... 1515
353	ORnP	8	3	56.17	LLLLFLIIIEQH.....I	32	R	M64376.1	1 ... 999
354	OR5BMn P	20	3	103.93	KXNKCTLSSSLMVFIQF	30	M	AF146372.1	509 ... 1456
355	OR10Gn P	0	11	138.1	LHGCGGSHVQFTDILAT	63	M	AF259072.1	55611 ... 54658
356	OR2Yn	0	5	209.23	LLGSCAANIQLMARVVV	74	M	AC044846.2	139468 ... 138536
357	OR10Dn P	1	11	138.1	LHGCGGSHVLLSNVAM	66	M	AC074177.4	128803 ... 129726
358	OR3BnP	7	X	158.48	IHAPSILNTYLLSFVAA	37	M	AL136158.1 4	29455 ... 30402
359	OR8Dn	0	11	138.1	LCVICAVDIHCIIGNMA	62	R	X80671.1	203 ... 1129
360	OR5RnP	0	11	52.13	LLMICVYVFHIIFADMS	68	M	AF102528.1	52 ... 669
361	OR10Gn	0	11	138.1	LHGSCGSHVQLINIVAG	58	M	AF259072.1	55611 ... 54658
362	OR5BDn P	12	11	53.74	MTGTCVVIHRALSSITP	39	M	NM_013728. 1	1 ... 948
363	OR5ALn P	1	11	52.13	VIVVLSYVVQALIANTC	52	M	AC073947.3	29192 ... 30115
364	OR52Hn P	3	11	4.15	LHFVSGRVPCLGVPTVT	59	M	AF121975.1	50 ... 1012
365	OR10Gn	0	11	138.1	LHGGCSSHVQLITVVAG	56	M	AF259072.1	55611 ... 54658

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
366	OR5Mn	0	11	52.17	CIVHIVYTMEWMVANLF	52	M	AF146372.1	509 ... 1456
367	OR51Mn	0	11	4.15	MHSFSIRAPILGVVTVL	50	M	NM_013617.1	1 ... 921
368	OR6Tn	0	11	138.1	SFGTFAAWCPLALSVLG	52	M	NM_010991.1	1 ... 939
369	OR6DnP	5	10		SLGSFVVLGLKALVLT	69	R	AF034903.1	85 ... 1053
370	OR4B1	0	11	45.36	IHGVIGGHIQVNSFSF	62	M	AF102522.1	40 ... 660
371	OR5ALnP	4	11	52.13	VISVVGMIQALIANVC	50	M	AF146372.1	509 ... 1456
372	OR51Qn	0	11	4.15	FHSFSACAPSLGLAIIV	49	M	NM_013617.1	1 ... 921
373	OR4Dn	0	11	138.1	LHGGIAGHVQLMNNVTM	63	M	AC019272.4	62255 ... 61317
374	OR52Nn	0	11	4.58	MHTGSLRLPSLGVAIGF	52	M	NM_013619.1	118 ... 969
375	OR4Xn	0	11	45.36	MHGGGAIGHGQLINGISV	58	M	AB030896.1	1 ... 906
376	OR8Jn	0	11	52.03	LLIVVLYTVVYVSANVG	77	M	X89682.1	2 ... 472
377	OR51JnP	2	11	4.15	MHSMSIKLPLLGIVTFL	46	M	AF071080.2	15931 ... 16851
378	OR10Gn	0	11	138.1	LHGSCSSHVQLIDIVAG	60	M	AF259072.1	55611 ... 54658
379	OR52En	0	11	4.58	MHTGTVRLPFLGVIIID	66	M	AF121979.1	53 ... 1106
380	OR4Xn	0	11	45.36	LHGGIIGHAQLINGLSI	64	M	AB030895.1	1 ... 924
381	OR10A2	1	11	5.69	MFGVCAPVVQWAGTVVI	76	M	AF247657.1	1 ... 945
382	OR5Mn	0	11	52.14	CIVHVYVICWMIANFY	49	R	AF091579.1	7 ... 663
383	OR52En	0	11	4.58	MHTGSRFPFLISVVGI	59	M	AF121979.1	53 ... 1106
384	OR8Kn	0	11	51.94	LLIGLIYILVKIFADLS	53	M	AF146372.1	509 ... 1456
385	OR10An	0	11	5.66	MFGACASVVQWAATFIF	89	M	AF247657.1	1 ... 945
386	OR8LnP	3	11	52.13	LIVVMSYVLQLLANTF	51	M	AF102528.1	52 ... 669
387	OR5BPnP	8	11	52.82	VVVVVGGSIVPPVGLHL	43	R	U50948.1	34 ... 978
388	OR52Nn	0	11	4.58	MHTGSARLPFLGVAIGF	54	M	AF121976.2	474 ... 1307

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
389	ORnP	7	11	45.36	WWWWIALLR.AAAAAK	28	M	X89686.1	32 ... 472
390	OR8JnP	1	11	51.94	LLIVILQTTVCVFSNLF	99	M	X89682.1	2 ... 472
391	OR5Mn	0	11	52.24	CIVIFVYNSQLMVATLS	50	R	AF091579.1	7 ... 663
392	OR52En	0	11	4.58	MHTVSIRMPLLGSILL	66	M	AF121979.1	53 ... 1106
393	OR5Tn	0	11	51.94	VCGTCAAHIHAFVIEV	52	M	AF146372.1	509 ... 1456
394	OR52Nn P	5	11	4.58	MHTGSVQLPFLGAAIGF	51	M	NM_013619. 1	118 ... 969
395	OR4B2P	6	11	45.36	IFGIIGRHVQVNSELS	53	M	AB030896.1	1 ... 906
396	OR51Kn P	6	11	4.15	MHSCSGKLPLLGIVNFL	51	M	NM_013617. 1	1 ... 921
397	OR52Qn P	10	11	4.58	MYTGSVRFPFLFVAVGI	45	M	AF121979.1	53 ... 1106
398	OR4Fn	0	15	86.21	IHGGMIIHIQFVNSISA	50	M	AF102522.1	40 ... 660
399	OR11Mn P	1	12	41.92	FSAACGSSFTL.....	48	M	AL359381.1	175785 ... 176720
400	OR52Nn	0	11	4.44	MHTGSARLPFLGVAIGF	57	M	NM_013619. 1	118 ... 969
401	OR56An	0	11	4.58	MNLASFRMPILQGGLLS	73	M	AF121981.1	89 ... 475
402	OR5AWn P	14	X		LXADFTSNLPTTSSNVV	39	R	X80671.1	203 ... 1129
403	OR52Nn	0	11	4.51	MHTGSARLPFLGVAIGF	55	M	AF121976.2	474 ... 1307
404	ORnP	15	X		ISCIFELTLPLPSNVV	31	M	AC073947.3	29192 ... 30115
405	OR52En P	6	11	4.58	VHSVSVRMPILGNIILL	62	M	AF121979.1	53 ... 1106
406	OR5BHn P	9	X		MVASC GGKTVSLCGTLT	40	M	NM_013728. 1	1 ... 948
407	OR4QnP	1	15	1.66	IHGAMAGHMQLMNSLSV	60	M	AC019272.4	62255 ... 61317
408	OR51En	0	11	3.04	MHSGSARLPFLGVIAIL	60	R	AF079864.1	632 ... 1576
409	OR11Kn P	2	15	1.66	FSGYGFCITLLITFVFI	53	M	AF121972.1	171 ... 1109
410	OR12D1 P	1	6	33.02	LHGSATIHLMSTGIAG	76	M	AL133159.4	16108 ... 15185

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
411	OR4NnP	3	15	1.61	LHGGGAGHIQLMNSMTM	55	M	AC019272.4	62255 ... 61317
412	OR11A1	0	6	33.02	FGATCTSVLVLTLSCLI	76	M	AL359381.1	175785 ... 176720
413	OR10C1	0	6	33.02	MLGACSCVGHFIATLIC	59	M	AL365336.1	122764 ... 121784
414	OR2H1	0	6	33.02	LLGTCVMQVQSLSSFVV	88	M	AL078630.1	48786 ... 47851
415	OR9RnP	8	12	59.71	LAVGGGCNIQFLLSITT	54	R	AF091579.1	7 ... 663
416	OR4FnP	0	7	0.53	.....VLHFQFVNSICG	50	M	AB030896.1	1 ... 906
417	OR7D4	3	19	11.31	VMAGTAIFVHLLATLGF	67	R	AF091580.1	7 ... 663
418	OR7E25 P	3	19	11.31	MIACSVLDLHIVIGFGL	61	R	AF091580.1	7 ... 663
419	OR2D2	0	11	5.69	LLGCCGSVVDFITGILI	65	M	AF073987.1	2 ... 649
420	OR10An	0	11	5.69	MFGVCAPVVQWAGTVVI	76	M	AF247657.1	1 ... 945
421	OR2WnP	3	1	254.49	LLGGCVCQGHWVLAVVS	54	R	L34074.1	73 ... 1011
422	OR7E16 P	8	19	11.31	IAGCDLLDLHIMLALGL	60	M	AF102536.1	22 ... 669
423	OR52Pn	0	11	4.44	MHCMSARLPCLGAAVIV	59	M	AF121976.2	474 ... 1307
424	OR6AnP	4	11	5.66	LLGCCGGIVKLDLAILG	94	R	M64386.1	130 ... 975
425	OR7D2	0	19	11.24	VMPITVITLHLIMTLGF	61	R	AF091580.1	7 ... 663
426	OR52Un P	3	11	4.44	LHSASVRFPMLGVAVAY	52	M	AF121976.2	474 ... 1307
427	OR2AGn	0	11	5.6	MLGGDTLSIYYVMGFLP	55	M	AF102527.1	22 ... 669
428	OR7G3	0	19	11.24	ILVGNLVDLHMVVTLG	64	R	AF091580.1	7 ... 663
429	OR56Bn P	3	11	4.44	IHVGSFRFPVLQLAGMS	41	M	AF133300.1	25713 ... 26573
430	OR2AGn P	1	11	5.51	MLGSDTLIGHYITGFL	55	M	AF102527.1	22 ... 669
431	OR56Bn	0	11	4.44	MHVASFRCSVLQLALMS	39	M	NM_013619.1	118 ... 969
432	OR6AnP	5	11	5.51	LLGCCGGIVKLDLAILG	93	R	M64386.1	130 ... 975
433	OR4FnP	4	19	63.23	IHGGMVLHFQFVNSICG	49	M	AB030896.1	1 ... 906

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
434	OR6Wn	0	7	148.04	SFGSFAVSSPQDLSFVT	47	M	NM_010991.1	1 ... 939
435	OR4Mn	0	15	1.59	LHGAMLGHIQLMSSISV	52	M	AF259072.1	104176 ... 105099
436	OR52Yn P	13	11	3.6	VVVVVLQWPVMGMAVDF	29	M	AF133300.1	46551 ... 47498
437	OR11Hn P	2	15	1.78	FFGTCLCWIPCLSVIG	61	M	AF121972.1	171 ... 1109
438	OR9An	0	7	148.04	LSGTFVFSWPALMAILG	46	M	NM_010991.1	1 ... 939
439	OR5Mn	0	11	52.19	CILLFFYDFQLMSANLS	50	M	AC069563.9	129775 ... 130725
440	OR6Vn	0	7	148.04	FFGSFAAAPTSDMAFVS	45	M	NM_010991.1	1 ... 939
441	OR4Nn	0	15	1.61	LHGGGAGHIQLMNSMTL	53	M	AC019272.4	62255 ... 61317
442	OR51An P	4	11	3.6	EHTDSLILPFTGLACMS	43	M	NM_013617.1	1 ... 921
443	OR9PnP	10	7	148.04	FGSNSFEHLVFIHSLLM	39	M	NM_010983.1	178 ... 975
444	OR4H6P	3	15	1.66	MHGCI LGHVQLVNSISG	59	M	AF259072.1	104176 ... 105099
445	OR51Fn P	2	11	3.6	MHTFSLRLPLLGLTTI	48	R	AF079864.1	632 ... 1576
446	OR7E1P	3	11	68.1	MVACGVLDLHIIDSFGL	55	M	AF073989.1	547 ... 1515
447	OR51Tn	0	11	3.6	MHSLSVRFPLAGLQNT	44	R	AF079864.1	632 ... 1576
448	OR2Vn	0	13	104.15	IVVGGSFDIQVICMLF	84	M	AF102535.1	16 ... 669
449	OR51Hn P	7	11	3.6	MHGG SARAPVLGAVIIL	51	R	AF079864.1	632 ... 1576
450	OR51An	0	11	3.6	EHTVSIRLPFTGIAC TL	48	M	AF071080.2	26330 ... 27262
451	OR2AIn P	2	5	209.13	YLGSCLSNFHLMARILL	55	M	AC044846.2	112743 ... 113748
452	OR2F2	0	7	148.74	LLGGFTSNVQIISSLLT	54	M	AF073974.1	41 ... 649
453	OR1F12	0	6	31.61	MMANNAINLHMVTVIFV	58	M	AC023167.7	60743 ... 61663

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
454	OR7G1P	0	19	11.24	ILAGSLMDVQMIASFGI	60	R	AF091580.1	7 ... 663
455	OR7G2	0	19	11.24	ILAGNLTNLLMIAAFGV	61	R	AF091580.1	7 ... 663
456	OR1M1	0	19	11.24	MHGISAFITHLIVAVIT	89	M	X89689.1	32 ... 472
457	OR51Un P	1	11	2.89	VTDDN.....	48	R	AF079864.1	632 ... 1576
458	OR52Hn	0	11	4.19	MHFVSGRIPDLGVPTVS	59	M	AF121975.1	50 ... 1012
459	OR1F1	0	16	6.15	MFVDNGVNHLIEGVM	75	R	M64377.1	1 ... 939
460	OR10Pn P	0	16	87.09	MIGICTTTTHLVATFII	48	M	AF247657.1	1 ... 945
461	OR4FnP	4	19	7.9	IHGGMVLHFQFVNSICG	49	M	AB030896.1	1 ... 906
462	OR2T1	0	1	254.77	HLVGFGGDLIMCCMLI	92	M	AF102527.1	22 ... 669
463	OR7EnP	9	19	22.8	VAGCDLLDLHIMLAFGL	60	M	AF102536.1	22 ... 669
464	OR51Gn	0	11	3.6	LHSFSVRLPLMGVITVI	57	M	NM_013617.1	1 ... 921
465	OR2Tn	0	1	254.77	MVAGFGLDTFIMCCMLI	67	M	AF102527.1	22 ... 669
466	OR5BGn P	2	11	51.27	AAAAAGGSIHNLFAVEI	52	R	U50948.1	34 ... 978
467	OR5WnP	3	11	51.27	MGADCLVDIHC MFVAC	51	M	AF146372.1	509 ... 1456
468	OR51Sn	0	11	3.6	MHSVSARLPLLLVLMGD	42	M	AF071080.2	26330 ... 27262
469	OR5WnP	1	11	51.27	.....LVFIES	55	M	AC074177.4	107189 ... 107708
470	OR51An P	3	11	3.6	EHTDSLILLPTGVAMMD	46	M	NM_013617.1	1 ... 921
471	OR5Dn	0	11	51.21	FCGVTGWCILFCIANES	46	M	AF146372.1	509 ... 1456
472	OR7EnP	4	4	5.55	MVACGVLDLHIIDSFGL	54	R	AF091580.1	7 ... 663
473	OR51Fn	0	11	3.6	MHTFSSRPVFGALTTF	53	R	AF079864.1	632 ... 1576
474	OR5Dn	0	11	51.21	YCVVSGWGVLYLFANEC	48	M	NM_013728.1	1 ... 948
475	OR52Rn	0	11	3.6	VHSSSIRWPFMGVAVAF	58	M	AF121976.2	474 ... 1307
476	ORnP	27	11	51.21	FCFAAGQSPGFLCFFFF	23	M	AB030893.1	37 ... 930

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
477	OR7EnP	6	3	121.47	MVACDVLDLHIIDSFSL	57	M	AF073989.1	547 ... 1515
478	OR6Qn	0	11	54.04	LTGACAVTLPLDVSFLA	52	M	NM_010983.1	178 ... 975
479	OR4Fn	0	6	185.89	IHGGMVLHFQFVNSICG	51	M	AB030896.1	1 ... 906
480	OR7EnP	3	13	40.31	FFSP.AAALHIMPAFGL	65	M	X89686.1	32 ... 472
481	OR7En	0	2	95.17	MVACDVLDLHIIDSFGL	57	M	AF073989.1	547 ... 1515
482	OR4Nn	0	14	0.27	LHGAMVGHVQLMNSLSL	58	M	AC019272.4	62255 ... 61317
483	OR2ASn P	7	1	254.77	.....GGGGMICGLLP	43	M	AF102535.1	16 ... 669
484	OR11Hn	0	14	0.33	FFGTCFIGIPYFQSVLF	90	M	AF121972.1	171 ... 1109
485	OR2Tn	0	1	254.77	MLAGFGLDMLIMCCMLI	69	M	AF102527.1	22 ... 669
486	OR2TnP	1	1	254.77	CMMGFSGDLLIMCCMLI	77	M	AF102527.1	22 ... 669
487	OR2AKn P	3	1	254.55	TLGGACSNIHVSGILL	50	M	AF102533.1	16 ... 669
488	ORnP	16	12	4.38	VLKSKCWQLPFYMLLM	25	R	Y07557.1	1 ... 942
489	OR5DnP	4	11	51.21	FCAVTGWSTLFCIANES	48	R	U50948.1	34 ... 978
490	OR7EnP	1	4	5.55	FVACDVLDLHIIDNFGL	54	M	AF102536.1	22 ... 669
491	OR5L2	0	11	51.27	FCGVVCCCIHLLVANEV	53	M	AF146372.1	509 ... 1456
492	OR5Dn	0	11	51.27	FCVVLVWCTLSLVANES	48	M	NM_013728.1	1 ... 948
493	ORnP	4	9	81.99	..CCCLFFQSIASGTI	23	M	AL359381.1	82137 ... 81544
494	OR10Qn	0	11	54.08	MVGSCGLPQLLLSVLI	50	M	AL365336.1	123248 ... 124093
495	OR9MnP	1	11	51.27	LCVDSGGSIHNLFAVEI	54	M	AC069559.8	73704 ... 74636
496	OR7E62 P	5	2	73.96	MAACDVLDLHTIDSFRL	56	M	AF073989.1	547 ... 1515
497	OR9LnP	13	11	54.06	MEVGCTLVAYGILTMIA	32	M	AC069561.1 0	147203 ... 146274

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
498	OR7E46P	10	2	73.96	MAGVEFCDLHIMPAFGL	54	M	AF102536.1	22 ... 669
499	OR1S1	0	11	54.08	MIVVNILITHLLVGVI	56	M	AC073769.1	133488 ... 132556
500	OR5DnP	0	11	51.21	FCVIMGWCTLSCISSEC	45	M	AC069563.9	111696 ... 112671
501	OR9InP	4	11	54.06	FTASCGGNICCISAVIT	46	R	AF091579.1	7 ... 663
502	OR5Dn	0	11	51.21	FCVVSGWCELSLLANES	53	M	AF146372.1	509 ... 1456
503	OR9QnP	4	11	54.08	FTASCGASVRTIFAVMA	47	M	AL365337.1	192661 ... 191711
504	OR51CnP	0	11	3.04	MKTVSARMPMLGAMTVV	51	R	AF079864.1	632 ... 1576
505	OR5WnP	1	11	51.27	FCADCGVDIHL.....	53	M	AC069561.1 0	127636 ... 126698
506	OR9InP	2	11	54.06	FTAGCSCGLHCICAMFA	46	M	AC074177.4	106297 ... 105361
507	OR51AnP	4	11	3.04	MHSVSARVPVPGVVTGL	72	M	X89685.1	2 ... 481
508	OR5L1	0	11	51.21	FCVVVCCCIHLLVANEV	55	M	AF146372.1	509 ... 1456
509	OR7EnP	5	13	50.42	.....VVDLHIMPAFGL	66	M	X89686.1	32 ... 472
510	OR5BLnP	18	11	54.08	ILGNXLENQCIFAMIT	29	R	M64392.1	1 ... 942
511	OR51En	0	11	3.04	MHSASVRFPLLGAIVMV	95	R	AF079864.1	632 ... 1576
512	OR51Dn	0	11	3.04	MHSASSRFPLIGIIVMV	61	R	AF079864.1	632 ... 1576
513	OR52In	0	11	3.04	MHTATARFPLMSGSMVS	46	M	AF121975.1	50 ... 1012
514	OR4KnP	2	18	19.04	IHTGMIVHSQFIDSLSS	56	M	AB030896.1	1 ... 906
515	OR52In	0	11	2.99	MHTATARAPLMSGSMVS	47	M	AF121975.1	50 ... 1012
516	OR4KnP	2	18	19.04	IHNIGIVVHSQFMTSIAI	55	M	AB030896.1	1 ... 906
517	OR52MnP	1	11	3.04	MHATSRYRLPIGIGVLL	51	R	AF079864.1	632 ... 1576

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
518	ORnP	7	6	31.58	FLVSCLLLLLLLEGIHW	30	M	AF073964.1	41 ... 649
519	ORnP	9	8	88.25	IXVVVLNIVNMTTIIFL	24	M	AC074177.4	149899 ... 148964
520	ORnP	9	10	70.63	YSIVMFYHAHFICELLN	26	M	AC068902.1 1	144125 ... 143193
521	ORnP	9	9	70.7	WWWWSWYGNFDDSTIX	26	R	AF091563.1	7 ... 669
522	ORnP	9	5	202.43	FFFFFF.PPPPP.....	27	R	AF034902.1	4197 ... 5177
523	ORnP	10	11	137.77	LLLLWSQFXQFLAVVVV	29	R	M64376.1	1 ... 999
524	ORnP	3	11	16.31	NNNNNLLXMNILTLLAI	27	M	AL136158.1 4	29455 ... 30402
525	ORnP	17	11	55.6	LAGNNIYCYHM..LLLL	26	R	M64377.1	1 ... 939
526	OR6Pn	0	1	154.6	LIACCASSMKFDLAMIL	60	M	NM_010983. 1	178 ... 975
527	OR7EnP	3	14	33.48	MVACDVLDLHIIDSFGL	54	R	AF091580.1	7 ... 663
528	ORnP	12	11	138.51	LMCHS.FFFFFFFMMMMM	29	R	AF091573.1	7 ... 663
529	OR7EnP	5	14	33.48	MAGGDFLDLYILPDFGL	55	M	AF073989.1	547 ... 1515
530	ORnP	7	10	127.4	S.CCCLLTYIIHHHHHH	31	M	AC020958.1	164590 ... 163746
531	OR10XnP	2	1	154.6	MLGGCSAITELIISGLG	49	M	AC073778.1	168744 ... 167803
532	OR10Zn	0	1	154.71	MAACCTTFGMVILSVLV	56	M	AC025913.3	108128 ... 109067
533	OR6KnP	2	1	154.73	MYGIVGCTPEWVVHEIT	40	R	M64386.1	130 ... 975
534	OR6Kn	0	1	154.73	MHGIVSCTPEWVIHEIT	44	M	AC027184.3	54955 ... 54017
535	OR1FnP	1	4	97.57	.....IEGVMT	73	R	M64377.1	1 ... 939
536	OR1ABnP	3	19	19.44	MIGISAFNTHLV.....	64	M	AC073769.1	133488 ... 132556
537	OR52MnP	1	11	2.89	MHATSARYLPIGIGVLL	49	M	AF121975.1	50 ... 1012
538	OR1XnP	6	5	202.43	MIANTLGIVHIFAALFA	71	M	AF102530.1	1 ... 666

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
539	OR4FnP	8	16	83.04	QQQQQVIHSQFVNSLTC	46	M	AC019272.4	62255 ... 61317
540	OR52Mn P	5	11	2.89	MHATSVRYLPIGIGVLM	45	R	AF079864.1	632 ... 1576
541	OR2Vn	0	5	209.61	IVVGGSFDIQVICMLF	83	M	AF102535.1	16 ... 669
542	OR2V1P	4	5	209.61	IVVGGSFDIQALCCMLL	90	M	AF102537.1	16 ... 669
543	OR2Zn	0	19	65.55	ITGVGSVNIQILSGILL	76	M	AC073769.1	54319 ... 55289
544	OR52Kn P	5	11	2.89	.....AMFIEL	52	M	AF121975.1	50 ... 1012
545	OR10Hn	0	19	19.7	MFGFSWGMVIGLVTAI	75	M	AC023604.2	214343 ... 213396
546	OR2Dn	0	11	5.77	ILGCCRSVVDFIMGILA	85	M	AF073987.1	2 ... 649
547	OR7EnP	6	2	161.49	VVGCCSSDLHIMPAFGL	64	M	X89686.1	32 ... 472
548	OR11Gn P	4	14	0.27	FFGSCSLWIPVSLSLLI	68	M	AC027184.3	54955 ... 54017
549	ORnP	12	14	0.27	GSCGNSLHHYLMVNIL	28	M	AF121972.1	171 ... 1109
550	OR11Gn	0	14	0.33	FFGSCNLWIPNFLSPVM	67	M	AF121972.1	171 ... 1109
551	OR11Hn P	5	14	0.33	FTGTAFFSVSQFLSIIL	68	M	AF121972.1	171 ... 1109
552	OR6Kn	0	1	154.73	MHENGGFIPMDHATII	46	R	AF034897.1	354 ... 1199
553	OR11Hn	0	14	0.33	FFGTCVGCVPLCFNIIG	71	M	AF121972.1	171 ... 1109
554	OR6KnP	0	1	154.73	MHGNGGFVPEWDHAAIF	46	M	AL365336.1	122764 ... 121784
555	OR11Hn P	2	14	0.33	FFGTCLIGISFFVSFIL	70	M	AF121972.1	171 ... 1109
556	OR6KnP	2	1	154.82	MHGVAGFMPECDRASIT	43	M	AC027184.3	54955 ... 54017
557	OR6Kn	0	1	154.84	MHGISGCLPEWVIHEIA	45	R	AF034900.1	1 ... 963
558	OR2Ln	0	1	254.55	SSGGAGINAHYVSTFLF	53	M	AF102527.1	22 ... 669
559	OR4GnP	8	16	83.04	ICRKMAVHSQFVNSISA	45	M	AB030892.1	1 ... 939

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
560	OR6Nn	0	1	154.84	IHGACGGGVELDINKIA	50	R	M64386.1	130 ... 975
561	OR2LnP	2	1	254.55	SLAVGGINAHY.....W	52	M	AF102535.1	16 ... 669
562	OR9A1	0	7	146.91	LLGTLVLSWPALMAIIG	45	M	L14567.1	17 ... 667
563	OR6Nn	0	1	155.69	THGACACCSELDINIII	51	M	AL136158.1 4	29455 ... 30402
564	OR10Hn	0	19		MFGFSCGMVVAGLV TAL	86	M	AC023604.2	245345 ... 246298
565	OR7EnP	4	9	71.72	MVACDVLDLHIMNSFGL	57	M	AF073989.1	547 ... 1515
566	OR2AQn P	5	1	155.69	FCHSCLLLLSLLPFFFF	31	M	AL359352.1	55588 ... 56546
567	OR2LnP	3	1	254.55	SMAGAGINAHYVSSFLF	50	M	AF102537.1	16 ... 669
568	OR5ARn	0	11	52.46	FVVDCGASAHLLLCIES	53	R	AF091579.1	7 ... 663
569	OR7EnP	4	9	71.79	TAGGETLDLHIMPAFGL	57	M	AF102536.1	22 ... 669
570	OR10AA nP	2	1	155.69	THGMCAAAPLHVIA TC	84	M	AC005992.1 5	9114 ... 8173
571	OR10Jn P	4	1	157.7	MIAICGVVVQSNVSVIV	72	M	X92969.1	8035 ... 8961
572	OR5A1P	0	11	55.81	FVGLCGGSIQSNVVVGT	81	M	Y15525.1	1 ... 705
573	OR2AHn P	5	11	52.46	MLGSCISSVILVFSIVI	51	M	AF247657.1	1 ... 945
574	OR10Jn P	4	1	157.7	LLGICGIMVQSNVSVLL	68	M	X92969.1	8035 ... 8961
575	OR56Bn P	2	11	4.93	IHMCSSRLPVLQLVVVS	39	M	AF121975.1	50 ... 1012
576	OR5M1	0	11	52.35	CIVIFIYSSQLMVANLS	49	R	AF091579.1	7 ... 663
577	OR52Wn P	0	11	4.93	MHTASLLAVPLGLSISM	48	M	AF121976.2	474 ... 1307
578	OR5AMn P	5	11	52.35	FIVIIYAYNVQLMVANLC	35	M	AC068904.1 5	113793 ... 114719
579	OR52Bn P	3	11	4.93	MHEVSTQTPVLGVPSVV	89	M	AF121975.1	50 ... 1012
580	OR5MnP	1	11	52.35	CVLLYFWVMQLLSANLV	48	R	X80671.1	203 ... 1129

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
581	OR5APn P	6	11	52.35	FGAGGALNIHFIFANES	55	R	X80671.1	203 ... 1129
582	OR56Bn	0	11	4.95	IHFCSFRLPVLQLALVS	41	M	AF121975.1	50 ... 1012
583	OR5APn	0	11	52.35	FGLGCTANIHMIFSIVS	55	M	AF121977.1	262 ... 1197
584	OR52Bn	0	11	4.93	GHFVSARIPVLGVPMVL	73	M	AF121975.1	50 ... 1012
585	OR9Gn	0	11	52.5	FAAYCVGNIIKMLLNVC	45	M	AC074177.4	106297 ... 105361
586	OR52Kn	0	11	2.86	MHSISARLPLLGVASVL	53	M	NM_013619. 1	118 ... 969
587	OR5MnP	1	11	52.35	FIVIIYAYNSQLMVANLC	51	M	AC074177.4	106297 ... 105361
588	OR52Kn	0	11	2.86	MHSISARLPLLGVAVL	52	M	NM_013619. 1	118 ... 969
589	OR52Kn P	3	11	2.82	MHSISARLPLLGVAGL	53	M	NM_013619. 1	118 ... 969
590	OR52Bn P	4	11	2.78	IHFISARVPDLGVLTVL	57	M	AF121975.1	50 ... 1012
591	OR2B6P	0	6	31.62	LLGAYATNWLLLVSFHI	79	R	L34074.1	73 ... 1011
592	OR2WnP	7	6	31.61	LLRGCASNVMLAFAIVL	58	M	AF102516.1	52 ... 669
593	OR2AnP	5	7	148.83	TMAHCTCLVHLISSILG	72	M	AF102521.1	22 ... 669
594	ORnP	16	6	31.61	FLVSCMDFMYIVLNNVI	39	M	AF102516.1	52 ... 669
595	OR2LnP	0	1	254.55	STAVAGINAHYVSAFLF	50	M	AF102527.1	22 ... 669
596	OR2W2P	5	6	31.61	LLGGCVCQSYWVLSIVM	55	R	L34074.1	73 ... 1011
597	OR2LnP	1	1	254.55	SLAGA.....	61	M	AF102535.1	16 ... 669
598	OR2B7P	1	6	31.61	LLGGCTTNIQLIVSFLV	59	M	AC044846.2	105668 ... 104736
599	OR2Ln	0	1	254.43	SLGGAGINAHYVSAFLF	53	M	AF102527.1	22 ... 669
600	OR5BFn	0	1	254.77	VVVYLASYMHSISAVGG	46	M	AL359352.1	9138 ... 8177

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
601	OR2LnP	4	1	254.55	SVAGMSMDAHYVSTFLF	47	M	AF102527.1	22 ... 669
602	OR7EnP	3	10	17.14	MVACCVLDLHI.....	51	R	AF091580.1	7 ... 663
603	OR1H1	2	9	106.04	LGADNVIHVHLLVALLA	57	M	AC073769.1	133488 ... 132556
604	ORnP	14	1	254.49	TTTKKSERIYIVSSFLI	24	M	AF102527.1	22 ... 669
605	OR4Dn	0	11	55.81	IHGGIASHIQLMNNVTI	64	M	AC019272.4	183633 ... 182701
606	OR1Ln	0	9	106.04	MYGNSFFHLHLQEAVLT	54	M	AC023167.7	60743 ... 61663
607	OR5AXn	0	1	254.2	L TSAIVIFAYGGVGLSS	47	M	AL136158.1 4	154973 ... 155908
608	OR5An	0	11	55.77	YCGLCGGSIESTVSVGV	64	M	Y15525.1	1 ... 705
609	OR5AYn	0	1	254.2	LVAGILNLLYGSIGYAS	50	M	AL359352.1	126933 ... 127889
610	OR13Gn	0	1	255.42	LTLGMMINVHLVADLAG	59	M	AF102540.1	16 ... 669
611	OR5BBn P	0	11	55.77	YASLCGGSVHPLEAVGG	54	M	Y15525.1	1 ... 705
612	OR9GnP	6	11	52.49	FVXNCAGNIIELMLNIT	47	M	AF121977.1	262 ... 1197
613	OR2TnP	4	1	254.77	HLAGFAGNLLVMCCMLI	75	M	AF102527.1	22 ... 669
614	ORnP	7	1	255.42	PVAGKGAF LHSVESLGS	38	M	AL365337.1	192661 ... 191711
615	OR1Jn	0	9	95.9	MITDSVLSSHLMVG VIL	66	M	AF102524.1	52 ... 669
616	OR2CnP	1	16	6.47	LLGACIGNIQFLVCFTV	85	M	M84005.1	1 ... 936
617	OR9GnP	2	11	52.49	FAAYCYGNILNLLNVS	49	M	AL365337.1	192661 ... 191711
618	OR2C1	0	16	6.4	LLGACIGNIQFLVCFTV	85	M	M84005.1	1 ... 936
619	OR51An P	2	11	4.22	.....	52	M	AF071080.2	26330 ... 27262
620	OR9Gn	0	11	52.49	LCAYCGGNAHNLVVTVS	53	M	AC068904.1 5	165039 ... 165965

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
621	OR52Bn	0	11	2.78	LHFISTRTPILGILTVL	61	M	AF121975.1	50 ... 1012
622	OR1K1	0	9	105.89	MFGVSMVHLYLIEGVVT	58	R	M64377.1	1 ... 939
623	OR51Rn P	3	11	2.78	MHTYSARLPGLGSISLL	47	R	AF079864.1	632 ... 1576
624	OR7EnP	2	13	54.83	MVACDVLDLHILDSFGL	57	M	AF073989.1	547 ... 1515
625	OR52Pn P	3	11	2.82	MHSASARLPLLGAAVVT	55	M	AF121975.1	50 ... 1012
626	OR7EnP	5	9	70.7	MVACDVQYVHSMDSFGL	48	M	AF102536.1	22 ... 669
627	OR7EnP	5	9	70.7	TAGGD.CCCCC.....	43	M	AF073989.1	547 ... 1515
628	OR4KnP	1	21	8.12	IHTGMIVHSQFIDSLSS	57	M	AF259072.1	104176 ... 105099
629	OR4KnP	2	21	8.12	IHNGIVVHSQFMTSTAT	54	M	AB030896.1	1 ... 906
630	OR7EnP	6	9	70.7	.....VFLVHSPAFGL	58	M	X89686.1	32 ... 472
631	OR51In	0	11	4.15	MHSFSGKTPFVGIVITYM	51	R	AF079864.1	632 ... 1576
632	OR51In	0	11	4.15	MHSMSGRTPLLGVLTfM	56	R	AF079864.1	632 ... 1576
633	OR2AnP	1	7	148.83	TLAICTFL.....	63	M	AF102521.1	22 ... 669
634	OR2A2	2	7	148.83	TLAVCTCLVHLITCVLG	68	M	AF102521.1	22 ... 669
635	OR2AnP	8	7	148.83	TFAACTCLVHLITCVLG	68	M	AF102521.1	22 ... 669
636	OR2Gn	0	1	256.63	LHGSCMSTVQLLASFLV	59	M	NM_008762.1	1 ... 936
637	OR2AnP	0	7	148.83	TLAHCAFFFFL.....	57	M	AF102521.1	22 ... 669
638	OR6Fn	0	1	254.2	MFGCYGCAVPLAIAVIS	71	R	M64378.1	1 ... 933
639	OR2AnP	4	7	148.83	TLAHCAFLVHLISCILG	68	M	AF102521.1	22 ... 669
640	OR2Gn	0	1	256.02	LLGSCISSIHFLVSFVI	63	M	M84005.1	1 ... 936
641	OR7E37 P	5	13	26.5	MAGGEFLDLHIMPAFGL	57	M	AF073989.1	547 ... 1515
642	OR5AVn	0	1	256.02	AMATVMSCMHAVFGLVI	51	M	AL359352.1	9138 ... 8177

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
643	OR2AJnP	7	1	254.43	VLLGCGINVHYVSAFLI	55	M	AF102527.1	22 ... 669
644	OR13EnP	1	9	39.89	MLGSCLTNLQLLATLTA	79	M	AJ251155.1	15491 ... 16423
645	OR2Cn	0	1	257.85	FHGACAGTVGLMASFVL	63	M	M84005.1	1 ... 936
646	OR2TnP	0	1	254.43	IPGGCSLDLQAMCCMLV	59	M	AF102537.1	16 ... 669
647	OR2WnP	2			LMGSCVCNIMQTLGLLV	56	M	M84005.1	1 ... 936
648	OR13Jn	0	9	39.89	MLGSCALKTEILGSLLV	82	M	AJ251155.1	6062 ... 6997
649	OR6RnP	2	1	254.39	SFGCFLGLPSLDSSLIS	45	M	NM_010983.1	178 ... 975
650	OR5ATn	0	1	254.39	VLASLVYIMHGLINLDC	50	M	AL359352.1	111313 ... 112242
651	OR2Zn	0	19	10.64	ITGVGSVNIQILSGILL	76	M	AC073769.1	54319 ... 55289
652	OR4Ln	0	14	0.08	MHGGMLIHSQVLDSLST	53	M	AB030893.1	37 ... 930
653	OR4UnP	14	14	0.15	RHSGMAMHSQVLDSLST	46	M	AB030895.1	1 ... 924
654	OR4Fn	0	6	185.98	IHGGMIHIIQFVNSISA	50	M	AF102522.1	40 ... 660
655	OR4FnP	2	6	185.98	IHGGMAIHVQFVNSISS	50	M	AB030896.1	1 ... 906
656	OR4Fn	0	6	185.98	IHGGMATHVQFVNSISG	50	M	AB030896.1	1 ... 906
657	OR4Fn	0	6	185.98	IHGGMTIHVQFVNSISG	50	M	AB030896.1	1 ... 906
658	OR4AnP	5	11	50.28	IHGGILGHVQFVNDICV	65	M	AF102522.1	40 ... 660
659	OR4LnP	1	14	0.21	KHGSMLIHSQVLDSLST	53	M	AB030893.1	37 ... 930
660	OR7E33P	6	13	54.79	MAGGEFLDLRILPAFGL	56	M	AF073989.1	547 ... 1515
661	OR2Cn	0	1	257.85	FHGACAGTVGLMASFVL	63	M	M84005.1	1 ... 936
662	OR4Kn	0	14	0.15	MHGGMSVHSQFVDSLVS	53	M	AF259072.1	104176 ... 105099
663	OR5U1	0	6	33.45	VIASVAASMHILFTAAI	84	M	AL359352.1	111313 ... 112242
664	OR4Kn	0	14	0.08	IHGGMAVHSQFMDLSS	58	M	AF259072.1	104176 ... 105099

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
665	OR5V1	0	6	33.45	LVVGCSANVHLLTGIGT	84	M	AL365337.1	192661 ... 191711
666	OR4QnP	1	14	0.08	LHGAMAGHVQLMNSISI	62	M	AF259072.1	104176 ... 105099
667	OR12D3	0	6	33.45	LHGSAAIYMHMLVTISG	70	M	AL359381.1	128169 ... 127234
668	OR4Kn	0	14	0.08	IHTGMIVHSQFIDSLSS	59	M	AF259072.1	104176 ... 105099
669	OR51CnP	3			MKTVSARMPMLGAMTVV	53	R	AF079864.1	632 ... 1576
670	OR1J2	0	9	105.94	MITDSVLSSHLMVGVL	66	M	AF102524.1	52 ... 669
671	OR5BJnP	3			SIGSAAVNTKFPSC LGV	46	M	AF073965.1	2 ... 643
672	OR1J1	0	9	105.82	TIADSGICLHLIAAAIL	63	M	AF102524.1	52 ... 669
673	OR13En	0			MLGSCLTNLQLLATLTA	83	M	AJ251155.1	15491 ... 16423
674	OR4KnP	5	14	0.08	IHGGMVIHTHFVNSLSM	53	M	AB030893.1	37 ... 930
675	OR1LnP	5	9	105.84	MYGNSFFHLHLQEAVLT	54	M	AC023167.7	60743 ... 61663
676	OR2CnP	2			FHGACAGTVGLMASFVL	59	M	M84005.1	1 ... 936
677	OR4TnP	9	14	0.21	MLSELLSHSQFVKLSI	47	M	AC019272.4	62255 ... 61317
678	OR5BnP	1			FVITSGCNIHNIVVND	51	M	AF121977.1	262 ... 1197
679	OR4Kn	0	14	0.21	IHGGM TLHFQFINSISS	53	M	AB030896.1	1 ... 906
680	OR11Ln	0	1	254.43	LVGACVTLHMLSVLI	50	M	AF121972.1	171 ... 1109
681	OR7E68P	5	10	17.21	MAGGELLDLHIMPAFGL	56	M	AF102536.1	22 ... 669
682	OR7EnP	2	10	17.21	MVACDVLDLHIIDSFGL	54	M	AF073989.1	547 ... 1515
683	OR7E31P	6	9	70.71	TAGGELLDLHIMPAFGL	55	M	AF073989.1	547 ... 1515
684	OR7EnP	3	9	70.71	MVACDVLDLHIMDSFGL	58	M	AF073989.1	547 ... 1515

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
685	OR5AKn P	3	11	52.82	LAATCGMNVHFLFVNLF	79	R	U50948.1	34 ... 978
686	OR5AKn	0	11	52.83	FAATCGMNVQFLFVNLF	79	R	U50948.1	34 ... 978
687	OR5AKn	0	11	52.83	FAATCGINVFDFVDLF	79	R	U50948.1	34 ... 978
688	OR5BQn P	9	11	52.82	TTTTTLLLLLMLTFFFF	42	R	U50948.1	34 ... 978
689	OR1Nn	0	9	105.94	LLGGNVLPMLHIMGFLV	56	R	AF091566.1	1 ... 663
690	OR1J4	0	9	105.94	MITDNVLNSHLIVGVIL	69	M	AF102524.1	52 ... 669
691	OR1Nn	0	9	105.94	MLGDSLLVTHLVLGVLV	85	R	AB038167.1	1 ... 933
692	OR2AnP	4	3	94.41	TLAVCTIMVHHLGSIVG	65	M	AF102521.1	22 ... 669
693	OR2ANn P	17	9	93.78	.....VVVLEFMVNLLI	23	M	AC074177.4	128803 ... 129726
694	OR5K1	0	3	104.47	FCETCGAHIHLLFSVQF	51	R	AF091575.1	52 ... 663
695	OR2K2	0	9	93.78	MLGSCVTTLFEMVSLLI	60	M	AJ251154.1	35662 ... 36615
696	OR8Hn	0	11	51.76	MAGTCGIDVNSIIVTLV	51	M	AC069559.8	36251 ... 35322
697	ORnP	15	11	51.76	LIFKNLFSPLXXHYIL	28	M	X89682.1	2 ... 472
698	OR4AnP	14	11	50.28	FGRRVVGHIQLYGHNYV	38	M	AB030895.1	1 ... 924
699	OR4An	0	11	50.28	LHGGVVGQFQIVNGSCI	59	M	AB030895.1	1 ... 924
700	OR6Sn	0	14	0.58	FFGAFAGPGPADLAVIS	50	R	M64378.1	1 ... 933
701	OR4RnP	16	11	50.28	NLGAIMEHVXSVNGNYL	52	M	AF102522.1	40 ... 660
702	OR13Cn	0	9	86.77	MLGTCGINVQFLTTFLT	65	M	AJ133425.1	61 ... 1014
703	OR13Dn P	4	9	86.77	MYGSCVLNTELIGNFLS	64	M	AC023789.5	371264 ... 372220
704	OR7EnP	3	11	2.13	MIACGVLDLHIINSFGL	54	R	AF091580.1	7 ... 663
705	OR10Pn P	1	12	59.88	MIGICTTTTHLVATFII	49	M	AF247657.1	1 ... 945
706	OR8In	0	11	51.76	MVVCCMISISVSLATLS	50	M	AC069559.8	137090 ... 138039
707	OR8G1	0			..IIIGICVHCIVGNIV	75	R	AF091576.1	52 ... 663

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
708	ORnP	7	12	59.88	CFPGEAFFTLL.....	34	M	AL359352.1	145887 ... 145042
709	OR5F1	0	11	51.76	MIATCGANVNHSLANIG	50	M	Y15525.1	1 ... 705
710	OR5FnP	1	11	51.76	MIATCGANVNYFFANKG	52	M	Y15525.1	1 ... 705
711	OR6BnP	6	2	251.7	LSVCCFSIIKFDLAILF	70	M	L14567.1	17 ... 667
712	OR2D1	0			LLGCCASVVDFITGILI	64	M	AF073987.1	2 ... 649
713	OR5ASn	0	11	51.76	MAADCLSTVHLLLCIQS	52	M	AC068904.1 5	165039 ... 165965
714	OR5SnP	8	2	251.7	FSSTTGRSVQLKLCMMN	64	R	AF091579.1	7 ... 663
715	OR5AQn P	0	11	51.76	SAVTDAGNTHGPFSIAF	51	R	X80671.1	203 ... 1129
716	OR6BnP	3	2	251.7	LSVCCFSIIKFDLAILF	67	M	L14567.1	17 ... 667
717	OR5JnP	2	11	51.76	YVLTGGGNTHGLFSIAL	52	R	X80671.1	203 ... 1129
718	OR9AnP	4	7	146.91	QLGTLVFFFWPALMAIIG	44	M	NM_010991.1	1 ... 939
719	OR5BEn P	2	11	51.76	YSLTCVLNTHSFLSTST	45	R	AF091564.1	7 ... 663
720	OR9An	0	7	146.91	LLGTFVFFFWPVLMAVLG	47	M	NM_010991.1	1 ... 939
721	OR8Hn	0	11	51.76	MVGTCGIDVNSIIATLV	51	M	AC069559.8	36251 ... 35322
722	OR5BNn P	14	11	51.76	LLMTCAYMSHS.....P	54	M	AF102528.1	52 ... 669
723	OR8Jn	0	11	51.76	LLIVVLYTVVCVSANLF	80	M	X89682.1	2 ... 472
724	OR9NnP	9	7	146.91	LFGTFIIIIIL.AAAAA	36	M	NM_010991.1	1 ... 939
725	OR7EnP	4	7		MVACGMLDLHITHSFAL	51	R	AF091580.1	7 ... 663
726	OR7E9P	3	7		MVACDVLDLHVIDSFGL	51	M	AF073989.1	547 ... 1515
727	OR8KnP	8	11	51.76	MMITLICQIIDILTNP	36	M	AC069563.9	28460 ... 29383
728	OR2AnP	1	7	148.97	ILAHC.....	44	M	AF102521.1	22 ... 669
729	OR8Kn	0	11	51.76	LLIIFIYQMFKSFSNLS	56	M	AF102528.1	52 ... 669
730	OR7E39 P	4			MVGGEFLHFLHIMPAFGL	55	R	AF091580.1	7 ... 663

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
731	OR7E27 P	3			MAGGELLDLHIMPAFGL	57	M	AF102536.1	22 ... 669
732	OR2Hn	0	6		FLGTCVMEVQSLASILV	81	M	AL078630.1	41097 ... 40165
733	OR13Cn P	2	9	40.16	MLGACGATVQLMANFLV	87	M	AJ133428.1	61 ... 1017
734	OR13Cn	0	9	40.16	MFGACGAAVQLMTNFLV	89	M	AJ133424.1	61 ... 1017
735	OR2S1P	4	9	40.16	MFGACGANVQLMTNELL	89	M	AJ251154.1	2703 ... 1747
736	OR2AMn P	1	9	40.16	.....RRRRRV.MMMM	63	M	AJ251154.1	2703 ... 1747
737	OR1N1	0	1		MLGDSLLVTHLVLGVLV	85	R	AB038167.1	1 ... 933
738	OR2S2	0	9	40.13	MFAGCSIAVHLMTNFLV	83	M	AJ251154.1	2703 ... 1747
739	OR7E26 P	4	1		MAGGELLDLHIMPAFGL	56	M	AF102536.1	22 ... 669
740	OR1F11	0			LAGNNGVNLHLIEGVM	99	R	M64377.1	1 ... 939
741	OR5ACn P	3	3	103.97	FGATCIIHHLIFSIQF	66	R	AF091575.1	52 ... 663
742	OR5B10 P	2	13		MVATNGCNLRDLMSNVL	46	M	AF102528.1	52 ... 669
743	OR2AnP	1	12	85.7	TLAVCAFLVHLIACILG	76	M	AF102521.1	22 ... 669
744	OR1E5	0	13		MLGDSLLHLHLIMGILI	83	R	Y07557.1	1 ... 942
745	OR4Fn	0	6	185.71	IHGGMVLHFQFVNSICG	51	M	AB030896.1	1 ... 906
746	OR5CnP	0	9	40.53	MAADC.....	47	M	Y15525.1	1 ... 705
747	OR2WnP	0	6	31.62	LLGGCVSNIMQALAIIA	64	M	AF102516.1	52 ... 669
748	OR2L2	0			..IIIGINAHYVSSFLL	48	M	AF102537.1	16 ... 669
749	OR4H8P	2	14		MHGCI LGHVQLVNSISG	56	M	AF259072.1	104176 ... 105099
750	OR5D10 P	5			LCVVTTWCTLFTSANES	44	R	AF010293.1	211 ... 1143
751	OR7A12 P	1	14		MVIVSAMNIEMMSALGG	68	M	AF283558.1	1 ... 927
752	OR2L1	0			..IIIGINAHYVSTFLF	48	M	AF102527.1	22 ... 669
753	OR2F3P	0	14		LLGGFTSSVQIISSLLT	55	M	AF073974.1	41 ... 649

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
754	OR4H10P	2	15		MHGCI LGHVQLVNSISG	57	M	AF259072.1	104176 ... 105099
755	OR5H1	0			..IIILGHIHFVFSIQF	56	R	AF091575.1	52 ... 663
756	OR2K1	0			..IIIIITTLVCMVSLLI	58	M	AJ133428.1	61 ... 1017
757	OR7E11P	7	11		MAGGEFLDLHILPAFGL	52	M	AF073989.1	547 ... 1515
758	OR7A3P	1	11		MVIVSAMNIEMMSALGG	68	M	AF283558.1	1 ... 927
759	OR6A1	0	11		LLGCCGGIVKLDLAILG	91	R	M64386.1	130 ... 975
760	OR5I1	0	11		FCADSLGSHVFLYGVEI	52	M	Y15525.1	1 ... 705
761	OR2H3	0	6		ILGTCVIGVQSVASILV	86	M	AL078630.1	41097 ... 40165
762	OR10J1	0			MVGICGIVTQSTISVLV	73	M	X92969.1	8035 ... 8961
763	OR7E3P	3	11		MFACGVLDLHIIDSFGL	54	M	AF102536.1	22 ... 669
764	OR1D6P	1	11		LVVANLFYIHLTGIFI	48	R	Y07557.1	1 ... 942
765	OR5D10P	2	18		LCVVTTWCTLFTSASES	45	R	U50948.1	34 ... 978
766	OR5D5P	2	18		LCVVTTWCTLFTSANES	46	M	AC073947.3	29192 ... 30115
767	OR52A1	0	11		MHQGSMVCLIGVAVAF	72	M	NM_013620.1	1 ... 945
768	OR2AEn	0	7	98.36	HLGGCMGNIHIVSSLLL	48	M	AC073769.1	143294 ... 142353
769	OR6LnP	7	10	149.44	LLSSCSSAVSLRAAILA	40	M	NM_010983.1	178 ... 975
770	OR6LnP	7	10	149.44	LLSSCSSAVSLRAAILA	41	M	NM_010983.1	178 ... 975
771	OR7MnP	7	10	149.44	.....NVYVSL.....	29	M	AC073947.3	43325 ... 42733
772	OR13Cn	0	9	86.77	MFGACGTDVQFMSNVLI	69	M	AJ133428.1	61 ... 1017
773	OR13Cn	0	9	86.85	MLGTCGANVQFMATFTM	71	M	AJ133425.1	61 ... 1014
774	OR2InP	6			LLGSC.....	79	M	AL078630.1	151152 ... 150391

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
775	OR4An	0	11	50.28	LHGGVVGHFQVVNSICV	58	M	AB030895.1	1 ... 924
776	OR2InP	3			.....RRRRRMARILL	77	M	AL078630.1	151152 ... 150391
777	OR4AnP	4	11	50.28	LHGGVVGSGFQVVNGICV	53	M	AB030896.1	1 ... 906
778	OR4AnP	7	11	50.28	PHGGAVAHFQVVNGICV	57	M	AB030896.1	1 ... 906
779	OR8C1P	2	11		LCVHCGMGVHCMIVVVV	72	M	AC068905.1 2	76922 ... 75948
780	OR4AnP	1	11	50.28	LHGDVVGHFQVVNGICV	56	M	AB030896.1	1 ... 906
781	OR7E15 P	5	11		MAGGELQDVHIMPAFGL	54	M	AF073989.1	547 ... 1515
782	OR10A1	0	11		MFGVCAPVVQWAGTVVI	76	M	AF247657.1	1 ... 945
783	OR2An	0			TSAVCTCLVHLI.....	70	M	AF102521.1	22 ... 669
784	OR7EnP	6			MAGGELFHLHIMPAFGL	57	M	AF073989.1	547 ... 1515
785	OR7En	0			MAGGDFLDLHIVPAFVL	54	R	AF091580.1	7 ... 663
786	OR51A1 P	5	11		MHTLSARLPLLAVITFL	43	R	AF079864.1	632 ... 1576
787	OR7E47 P	4			KAGTNLLDLYIMPTFGL	56	M	AF073989.1	547 ... 1515
788	OR5B5P	2	3		MAATNICNIHELVANIS	48	M	AF146372.1	509 ... 1456
789	OR1F10	0	3		MFVDNGVNLHLIEGVM	72	R	M64377.1	1 ... 939
790	OR8G2	0			..IIIGLGIHFVLSNIT	75	M	AF102518.1	52 ... 669
791	OR1Sn	0	11	54.08	MIVVNILITHLLVGVIF	55	M	AC073769.1	133488 ... 132556
792	OR4AnP	3	11	50.73	LHGGAVGHFQVVSGLCV	56	M	AB030896.1	1 ... 906
793	OR4AnP	7	11	50.76	LHGGILGHFQVVNGMCV	58	M	AB030896.1	1 ... 906
794	OR4AnP	5	11	50.66	LHGGVLGHFQVVNGMRV	56	M	AB030896.1	1 ... 906
795	OR4AnP	7	11	50.73	PHGGVVGFRFQVVKVICV	54	M	AB030896.1	1 ... 906
796	OR4AnP	1	11	50.81	LHGGIVGHFQVVS GMCV	60	M	AB030896.1	1 ... 906
797	OR4AnP	10	11	50.81	LHGGVVGNFQVVNGICV	55	M	AF102522.1	40 ... 660
798	OR4An	0	11	50.73	LHAGVAGHVQFMNGICV	62	M	AB030895.1	1 ... 924
799	OR4An	0	11	50.73	LHGGVVGHVQFVNGICV	57	M	AB030896.1	1 ... 906
800	OR7E42 P	4			MAGGELQDVHIMPAFGL	54	M	AF073989.1	547 ... 1515

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
801	OR2M3P	2			ITLGCFLDIDALCCMIF	55	M	AF102537.1	16 ... 669
802	OR4H11P	2	4		MHGCILGHVQLVNSISG	57	M	AF259072.1	104176 ... 105099
803	OR7E57P	5			MAXGEFLDLHILPAFGL	51	M	AF102536.1	22 ... 669
804	OR2B1P	0	5		LLGAYATNWLLLVSFHI	78	R	L34074.1	73 ... 1011
805	OR7E34P	2			MAGGDSLDLHIMPAFGL	56	M	AF073989.1	547 ... 1515
806	OR7E56P	4			MAGDELFFLHILPAFGL	52	M	AF073989.1	547 ... 1515
807	OR3AnP	1	5		LHAGCACNTHALAAMAA	49	M	AF073967.1	2 ... 649
808	OR4H5P	2	5		MHGCILGHVQLVNSISG	56	M	AF259072.1	104176 ... 105099
809	OR1En	0	5		MLGDSLLHLHLIMGILI	82	R	Y07557.1	1 ... 942
810	OR51CnP	2	11	3	MKTVSYYYIXQ.....	48	M	AF121975.1	50 ... 1012
811	OR2WnP	2	6	30.51	LLGGCVSNIMQALAIIA	64	M	AF102516.1	52 ... 669
812	OR51B1P	5	11		AHSVSGRSPVRPLITIL	68	M	AF071080.2	15931 ... 16851
813	OR7E81P	3			MAGGEFFSLHIMPAFGL	54	M	AF102536.1	22 ... 669
814	OR7E44P	1			MAGGELFDLHIMLAFGL	53	M	AF073989.1	547 ... 1515
815	OR5B7P	2	6		MAATNICNIHEL VANIS	47	M	NM_013728.1	1 ... 948
816	OR7E36P	4			MAGGELFFLHIMPAFGL	58	M	AF073989.1	547 ... 1515
817	OR2A5	0	7		TMAHCTCLVHLIASILG	74	M	AF102521.1	22 ... 669
818	OR5B1P	2	8		MAATNICNIHEL VANIS	47	M	AF146372.1	509 ... 1456
819	OR8B8	0	11	137.68	LLVVSGMGAHCVVVDIV	72	M	AC069559.8	120212 ... 119283
820	OR8B4P	0	11	137.71	LCVNCGVGAHSFVVITL	87	M	AC068910.2 1	133103 ... 132162

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
821	ORnP	15	11	137.77	LCVENRRRTATHCKSHII	35	M	AC069563.9	60295 ... 59327
822	OR8B3	0	11	137.77	LLVICAMGAHCVVNIV	85	M	AC069563.9	129775 ... 130725
823	OR2Bn	0	6	30.51	LLGSCASNQWLISFLI	89	R	L34074.1	73 ... 1011
824	OR8B6P	6	11	137.77	LAFFCGLSAHCVA AAVI	73	M	AC069559.8	96224 ... 95292
825	OR8B5P	6	11	137.77	LFFFXGLGAHCVVANTV	73	M	AC069559.8	96224 ... 95292
826	OR4E2	0	14	1.7	LHACIAGHGQLINSISS	90	M	AF259072.1	104176 ... 105099
827	OR8B7P	4	11	137.77	FCVICGWGAHCVA AIFV	71	M	AC069559.8	96224 ... 95292
828	OR11JnP	3	15	1.82	FSCAGFGSMPLCVSIII	56	M	AF121972.1	171 ... 1109
829	OR4E1P	3	14	1.7	MHACIAGHALLINSISV	92	M	AB030893.1	37 ... 930
830	OR10DnP	7	11	137.96	.....HHHILLGNVLSI	85	M	AC074177.4	12106 ... 13038
831	ORnP	10	14	1.7	VFRGGFHKFFF.....	23	M	AF102536.1	22 ... 669
832	OR8D2	0	11	137.77	LLVIGVLVWHRLIGNTA	70	M	AC073947.3	29192 ... 30115
833	OR11InP	1	1	126.31	FGAACGCLITLATSVTI	51	M	AL359381.1	175785 ... 176720
834	OR11JnP	1	15	1.82	FSCACFGWTPLCISIIL	56	M	AF121972.1	171 ... 1109
835	OR10AnP	3	11	5.64	MFGVCTPVVQWAGTVVI	74	M	AF247657.1	1 ... 945
836	OR8C3P	5	11	137.77	LCVHCGMGVHCMIVVVV	73	M	AC068905.1 2	76922 ... 75948
837	OR2DnP	6	11	5.64	LLGCCGSVVDFITGILI	62	M	AF073987.1	2 ... 649
838	OR4PnP	0	11	51.03	LHGGIVGHSQ L.....	59	M	AB030895.1	1 ... 924
839	OR7E21P	5			MAGGEFIDLHIMPAFGL	50	M	AF073989.1	547 ... 1515
840	OR2M1	0			IVLGCFLDIYAICSM LF	55	M	AF102537.1	16 ... 669
841	OR7AnP	4	19		NLAGVVMNLQM.....	63	M	AF073970.1	41 ... 649

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
842	OR5D11 P	1	8		LCVVTTWCTLFTSANES	44	R	AF010293.1	211 ... 1143
843	OR7E50 P	7	8		IVVCDMLDLHVFLDIFL	57	M	AF102536.1	22 ... 669
844	OR7E45 P	3			MAGGELFDLHIMPAFGL	54	M	AF073989.1	547 ... 1515
845	OR7E77 P	6			MAGGEFLDLHIMPAFGL	51	M	AF073989.1	547 ... 1515
846	OR8B2	0	11	137.77	LLVICAMGAHCVVNVIV	84	M	AC069563.9	129775 ... 130725
847	OR8D1	0	11	137.77	LVVVGALSTHALIANTV	87	M	AC073947.3	29192 ... 30115
848	OR8B1P	4	11	137.77	LLLVCGMGAHCVVNVIV	84	M	AC069559.8	96224 ... 95292
849	OR7A1P	2	19		MIVVSVVYLQMMTSLGG	72	R	M64376.1	1 ... 999
850	OR7E8P	4	8	13.72	MVACGVLDLHIIDSFGL	53	M	AF102536.1	22 ... 669
851	OR4DnP	7	11	55.86	MHGGVAGHVQLMNNISL	58	M	AC019272.4	183633 ... 182701
852	OR7E80 P	7	8	13.72	MAGGELQDVHIMPAFGL	54	M	AF073989.1	547 ... 1515
853	OR4DnP	5	11	55.86	MHGGGAAGHVQLMNNLTL	62	M	AC019272.4	183633 ... 182701
854	OR7E10 P	8	8	13.72	IVACDLLDLHIIDSFGL	55	M	AF073989.1	547 ... 1515
855	OR10B1 P	3	19	17.91	MLGCCLSVIEMILSVVM	85	M	AC012302.5	54283 ... 55224
856	OR2InP	3			.....LLLLMARILL	75	M	AL078630.1	151152 ... 150391
857	OR4Dn	0	11	55.86	MHGGVGGHAQLMNNVSF	65	M	AC019272.4	183633 ... 182701
858	OR5ACn	0			.VVVVIIHVHLIFGIQP	65	R	AF091575.1	52 ... 663
859	OR2I1	0	6	33.63	LLGSCASNAQLMARILL	79	M	AL078630.1	151152 ... 150391
860	OR10H1	0	19	19.86	MFGFSCGMVVAGLVTAL	88	M	AC023604.2	245345 ... 246298

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
861	OR7E59 P	5			CPEARVFLHIMPAFGL	53	M	AF102536.1	22 ... 669
862	OR7E28 P	4			MAGGELDLHIMPAFGL	54	M	AF073989.1	547 ... 1515
863	OR5B3	0			MVATNGCNIHDLVVNII	51	R	U50948.1	34 ... 978
864	OR2A6	0			TLAHCAFLVPLIACILG	75	M	AF102521.1	22 ... 669
865	OR6Cn	0			.VVVVCAIPPLVMAALI	47	M	NM_010991.1	1 ... 939
866	OR7E54 P	5			MAGGEFLDLHIMPAFGL	52	M	AF073989.1	547 ... 1515
867	OR7E48 P	3			MAGGEFLDLHIMPAFGL	57	R	AF091580.1	7 ... 663
868	OR67An P	3	11	76.42	MHSCAGTLPAQGIAVSL	83	R	AF091561.1	52 ... 663
869	OR4DnP	1	11	55.86	MHGGVAGHVQLMNNLTL	63	M	AC019272.4	183633 ... 182701
870	OR4CnP	1	11	50.91	VHGCILGHAQLLSICS	57	M	AB030896.1	1 ... 906
871	OR4DnP	2	11	55.86	IHGGIAGHVQLMNNVTL	65	M	AC019272.4	183633 ... 182701
872	OR10H2	0	19	19.94	MFGFSCGMVVAGLVMAL	85	M	AC023604.2	245345 ... 246298
873	OR10H3	0	19	19.94	MFGFSWGMVMGLVTAI	75	M	AC023604.2	214343 ... 213396
874	OR55Cn P	2	11	2.65	VYLLYLQPGGG.....	45	M	AF121980.1	160 ... 1053
875	OR55Bn P	3	11	2.65	.VVVVQLQVPLLMCTVS	53	M	AF121980.1	160 ... 1053
876	OR52Vn P	4	11	4.19	LHNHIMVYXFLGTTSP	48	M	NM_013619.1	118 ... 969
877	OR2B3	0	6	33.64	LLGACFINLQLFSILI	75	R	L34074.1	73 ... 1011
878	OR52Tn P	6	11	4.22	FGHFLIFLDFLDILTIS	45	M	AF121975.1	50 ... 1012
879	OR2J1P	5	6	33.64	LLGTCASTLHFLMSFVI	57	R	L34074.1	73 ... 1011
880	OR52Hn P	3	11	4.19	LHFVSGRVPCLGVPTVT	60	M	AF121975.1	50 ... 1012

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
881	OR2J3	0	6	33.64	LLGTCASNLHFLTSFVI	58	R	L34074.1	73 ... 1011
882	OR52An	0			FHSVS.....VVRLFS	75	R	AF079864.1	632 ... 1576
883	OR4Qn	0			.VVVVAGHMQLVNSLSV	56	M	AB030893.1	37 ... 930
884	OR52BnP	2	11	4.22	LHFVSVRTSILGVPSVL	60	M	AF121975.1	50 ... 1012
885	OR2N1P	9	6	33.64	LHGGCPIYSEALVCMLV	81	M	AJ132195.1	79 ... 906
886	OR51EnP	1			FHSASVRFPLLGAIAMV	90	R	AF079864.1	632 ... 1576
887	OR2J2	0	6	33.64	LLGICAIILHFLMSFVI	57	R	L34074.1	73 ... 1011
888	OR2In	0			.....RRRRRRMARILR	77	M	AL078630.1	151152 ... 150391
889	OR2J4P	5	6	33.64	LLGTCASNLHFLTSFVL	56	R	L34074.1	73 ... 1011
890	OR7E40P	4			MAGGDILDLYILPDFGL	55	M	AF073989.1	547 ... 1515
891	OR2H4P	3	6	33.64	LLGAYLTQIQAMASLLM	63	M	AL078630.1	41097 ... 40165
892	OR7E52P	5			IVVCDVLDLHVCDIFGL	61	M	AF073989.1	547 ... 1515
893	OR2InP	9			LLGSC.....	80	M	AL078630.1	151152 ... 150391
894	OR6C1	0			LIGVFTVIPALGCATLF	52	M	NM_010991.1	1 ... 939
895	OR7E30P	3			MAGGEFLDLHIMPAFGL	56	M	AF073989.1	547 ... 1515
896	OR5BAnP	0	11	53.69	LVVTSVFNIQNLFVTL	51	R	AF091579.1	7 ... 663
897	OR7H1P	3	19	11.38	MMGGTVLYIQLLVALDV	74	M	AF073989.1	547 ... 1515
898	OR5B2	0	11	54.45	MVATNGCNFHLTSNIF	47	R	U50948.1	34 ... 978
899	OR5AZnP	1	11	53.69	MIGTCTVNLLCILCLIF	48	R	AF091579.1	7 ... 663
900	OR5Bn	0	11	54.45	MVATNGCNIHDLVVNII	51	R	U50948.1	34 ... 978

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
901	OR52Bn	0	11	4.22	KILFSARIPSLGAASTL	64	M	NM_013619.1	118 ... 969
902	OR5BnP	2	11	54.45	MAATNICNIHELVANIS	49	R	U50948.1	34 ... 978
903	OR52Dn	0	11	4.19	MHYASVRIPFLGVAAML	66	M	AF121976.2	474 ... 1307
904	OR7A11	1	19	17.72	MVEASAI DLHMMAVLGV	67	M	AF283558.1	1 ... 927
905	OR5BnP	9	11	54.45	MAATSALTVDLLQFFL	41	M	NM_013728.1	1 ... 948
906	OR51AnP	5	11	4.19	THSWFSRMP LLGIVAFV	50	R	AF079864.1	632 ... 1576
907	OR7A15P	4	19	17.72	MIVGSVTHLHMM AALGG	74	R	M64376.1	1 ... 999
908	OR7C2	0	19	17.72	IIGCNGIGLETMTVLGF	98	R	AF091580.1	7 ... 663
909	OR7E23P	7	21	20.89	MAGGELFHLQIMPAFGL	57	M	AF073989.1	547 ... 1515
910	OR2E1	8	6	32.05	AHACCTINLQI.RRRRR	43	M	AL078630.1	106872 ... 105934
911	OR1I1	0	19	17.87	MHGTS AIQIHLIFGVGS	57	R	AF091566.1	1 ... 663
912	OR1RnP	3	17	3.12	MVGISAVHLHLIEGVVA	45	R	M64377.1	1 ... 939
913	OR4F3	0	8	0.07	IHGGMVLHFQFVNSICG	51	M	AB030896.1	1 ... 906
914	OR2AEn	0	7	98.7	HLGGCMGNIHIVSLLL	49	M	AC073769.1	143294 ... 142353
915	OR2InP	7			.....TTTTT MARILL	72	M	AL078630.1	151152 ... 150391
916	OR52AnP	2			IHSASVRFP LLGXPPPP	94	R	AF079864.1	632 ... 1576
917	OR7C1	0	19		ITGCNGIGLETIATLGI	81	R	AF091580.1	7 ... 663
918	OR2A3P	2	7	149.11	MLAACTCLINLVGGVLG	63	M	AF102521.1	22 ... 669
919	OR7A5	0	19		MIAGNAMY LQMITVLGG	74	M	AF283558.1	1 ... 927
920	OR2InP	3			.....MARILL	67	M	AL078630.1	151152 ... 150391
921	OR7A10	0	19		MLVGNAMNLQMMAVLGG	76	R	M64376.1	1 ... 999
922	OR2An	0			.....	81	M	AF102521.1	22 ... 669
923	OR2M2	0			IISGCFLDIDAICCM LF	57	M	AF102537.1	16 ... 669

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
924	OR7A8P	2	19		MLAVSSLNLQMIATLGG	71	M	AF283558.1	1 ... 927
925	OR2An	0			TSVCTTLIHL.....	78	M	L14566.1	62 ... 667
926	OR7E20P	4			MAGGELLFLHIMPAFGL	56	M	AF073989.1	547 ... 1515
927	OR2AnP	3			TLAHTCLVHL.....	65	M	AF102521.1	22 ... 669
928	OR5BhnP	7			MVASC GGKTVS.....	34	M	Y15525.1	1 ... 705
929	OR1En	0			LMGDSLLHLHLIMGISI	92	M	AC068902.1 1	196434 ... 195499
930	OR1EnP	1			MLGDSLLHLHLIIGVVL	98	M	AF073976.1	32 ... 649
931	OR5Bn	0	11	54.45	FVITSGCNIHNIVVND	51	R	U50948.1	34 ... 978
932	OR8RnP	12	11	73.74	LFLSYGGGAHH.....	52	M	AC069561.1 0	7848 ... 8783
933	OR5ANn	0	11	55.69	YSGLSGTAFQATLTFGA	55	R	AF091564.1	7 ... 663
934	OR5ANn P	1	11	55.69	YSGLCGTGIQATLTFGT	59	M	Y15525.1	1 ... 705
935	OR5BRn P	8	11	55.69	MSNVC GTVIQATLTFGT	33	M	Y15525.1	1 ... 705
936	OR2A1	0	7	149.18	TLGHCTCLAHLIACFLG	77	M	AF102521.1	22 ... 669
937	OR10An	0	11	6.81	MLGGCFLVQWAGTIIV	54	M	AF247657.1	1 ... 945
938	OR2A9	3	7	149.18	TLAHTCLVHLIACILG	78	M	AF102521.1	22 ... 669
939	OR2A7	0	7	149.18	TSVCTTLIHLVGAGLG	81	M	L14566.1	62 ... 667
940	OR10A3	0	11	6.81	MLGGCFVQWAGTIVV	58	M	AF247657.1	1 ... 945
941	OR10Cn	0	6	33.36	MLGACSCVGHFIATLIC	59	M	AL365336.1	122764 ... 121784
942	OR7A2P	0	19		MVIVSVMNLQVMAALDG	73	M	AF283558.1	1 ... 927
943	OR10Wn P	2	11	54.3	MIGSCASLQFVAAAIV	47	M	AC012302.5	54283 ... 55224
944	OR7A17	0	19		MVGGSAINSOMMAALAG	76	M	AF283558.1	1 ... 927
945	OR5Bn	0	11	54.3	MAATNGINIQDLISNVF	47	M	AF102528.1	52 ... 669
946	OR5BnP	5	11	54.3	MVATNGCNLRDLMSNVL	47	M	AF102528.1	52 ... 669

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
947	OR1Q1	0	9	106.13	TIAVNMLHLHLIEGVIG	54	M	AF073967.1	2 ... 649
948	OR2Hn	0	6	33.33	LLGTCVMQVQSLSSFVV	88	M	AL078630.1	48786 ... 47851
949	OR7EnP	5	3	90.04	MVACDVLDLHIIDSFGL	54	M	AF073989.1	547 ... 1515
950	OR7A14	0	19	17.72	MVIVSAMNI.....	71	M	AC073772.1	227187 ... 226252
951	OR1B1	0	9	106.13	FYGVTLVHLRLIEGLMG	49	M	AC068902.1 1	83719 ... 84647
952	OR12D2	0	6	33.23	LHGSSTIHLHMLVTIAG	81	M	AL359381.1	105330 ... 104407
953	OR7EnP	4	3	11.92	MVACDVLDLHIIDSFGL	55	M	AF073989.1	547 ... 1515
954	OR8BnP	5	15	74.31	LXVVEGMAHCVVVNIV	82	M	AC069559.8	96224 ... 95292
955	OR1L1	0	9	106.13	MLGNSLIHLHLVEGVIT	57	M	AC023167.7	60743 ... 61663
956	OR11An	0	6	33.36	FGATCTSVLVLTLSCLI	76	M	AL359381.1	175785 ... 176720
957	OR7AnP	4	12	44.29	....HLLDCYIRTTLSG	55	M	AF102534.1	52 ... 669
958	OR1C1	0	1	254.35	LVVNSGVHLHLIVGLAT	56	M	AC073769.1	133488 ... 132556
959	OR1D2	0	17	2.99	LVVANLLYIHLTGIFI	50	M	AF073967.1	2 ... 649
960	OR1L3	0	9	106.13	MLGNSFFHLHLAEGSVA	53	M	AC023167.7	14677 ... 15636
961	OR12Dn P	1	6	33.36	LHGSATIHLHMSTGIAG	76	M	AL359381.1	105330 ... 104407
962	OR4G1P	4	16	83.04	KHGGMAIHSQFVNSISG	47	M	AB030896.1	1 ... 906
963	OR2B4P	1	6	33.53	LLGSCGSNVQLLLGLLM	90	M	AL359352.1	95024 ... 95965
964	OR11H1	0	22		FFGTCLCWIPLCLSVIG	61	M	AC027184.3	54955 ... 54017
965	OR4Fn	0	16	83.04	IHGGMVIHSQFVNSLTC	50	M	AC019272.4	62255 ... 61317
966	OR56An P	5	11	4.73	MNLPSFQLPVLQAGFLS	38	M	AF121975.1	50 ... 1012

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
967	OR8NnP	7	4	164.13	REIIRVDAFLKKTANMI	34	M	AF102528.1	52 ... 669
968	OR7EnP	5			MVACDVLDLHIFDFGL	54	R	AF091580.1	7 ... 663
969	OR4Pn	0	11	50.95	LHGGIVGHSQLVNSIAV	56	M	AB030895.1	1 ... 924
970	OR6Cn	0			LIGVFCSTPPLGFATLF	51	M	NM_010991.1	1 ... 939
971	OR5BCnP	2	11	54.3	.....GCQIHFLLANIF	41	M	AC069561.10	51687 ... 50743
972	OR10QnP	4	11	54.3	MLGGCGLLQLLLVSFLV	48	M	AC012302.5	54283 ... 55224
973	OR5BnP	6	11	54.3	TDASNGGNIHELVTNIF	45	R	U50948.1	34 ... 978
974	OR10PnP	2	12	115.61	MIGICTTTTHLVATFII	46	M	AF247657.1	1 ... 945
975	OR1L4	0	9	106.22	MMGNSGIHFRLVETVIT	62	M	AF073967.1	2 ... 649
976	OR2APnP	3	12	115.61	YMGAFLLLLLL.....	49	M	AF073987.1	2 ... 649
977	OR1L6	0	9	106.22	MMGNSGIHFRLVETVIT	63	M	AF073967.1	2 ... 649
978	OR6UnP	6	12	115.61	DIGAFTLFMPLDLAALG	52	M	NM_010991.1	1 ... 939
979	OR5C1	0	9	106.06	MAADCAGSVHLLICIQA	50	R	X80671.1	203 ... 1129
980	OR11InP	1	15	70.72	FGAACGCLITLATSVTI	51	M	AL359381.1	175785 ... 176720
981	OR4AnP	6	11	50.78	LYGGVVGHFQVNVGCV	57	M	AB030896.1	1 ... 906
982	OR4GnP	14	2	114.45	ICRKMAVHSQFVNSISA	42	M	AB030892.1	1 ... 939
983	OR10Vn	0	11	56.15	MVGGCGLLPLLLISVLI	48	M	AL136158.14	29455 ... 30402
984	OR4G2P	2	2	114.45	KHGGMAIHSQFVNSISG	48	M	AB030896.1	1 ... 906
985	OR10VnP	3	11	56.15	MIGRCGLLQLLMVSFLV	45	M	X92969.1	8035 ... 8961
986	OR4F4	0	2	114.45	IHGGMVIHSQFVNSLTC	50	M	AC019272.4	62255 ... 61317
987	OR4G3P	14	19	63.51	ICRKMAVHSQFVNSISA	42	M	AB030892.1	1 ... 939
988	OR5AKnP	4	11	52.82	LGATCSMNINFLFVNLC	65	R	U50948.1	34 ... 978
989	OR10YnP	14	11	56.15	MIRGCGLLFLLLCGHHL	43	M	AF247657.1	1 ... 945
990	OR4GnP	2	19	63.51	KHGGMAIHSQFVNSISG	48	M	AB030896.1	1 ... 906

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
991	ORnP	9	5	111.92	IMCSRTTYVXQLHGFFT	23	M	AF073989.1	547 ... 1515
992	OR4Fn	0	19	63.51	IHGGMVIHSQFVNSLTC	50	M	AC019272.4	62255 ... 61317
993	OR8A1	0	11	137.56	LLVICVIGIELVSANIV	61	M	AC069559.8	96224 ... 95292
994	OR8Bn	0	11	137.56	LCVVSGMGAHSVVDVM	66	M	AC069559.8	120212 ... 119283
995	OR6DnP	3	10	47.91	AYVSSLLLRTH.....	55	R	AF034901.1	2110 ... 3078
996	OR7E14 P	7	11	16.31	MAGGELDLHIMPAFGL	58	R	AF091580.1	7 ... 663
997	OR2M4	0			IVLGCALDIVALCCMLF	57	M	AF102537.1	16 ... 669
998	OR4WnP	3	X		LLLLL.....LLFFII	36	M	AC069559.8	73704 ... 74636
999	OR4Fn	0	19	63.51	IHGGMVIHSQFVNSLTC	50	M	AC019272.4	62255 ... 61317
1000	OR7EnP	3			MAGGESLDLHIMPAFGL	57	M	AF073989.1	547 ... 1515
1001	OR4GnP	4	19	63.51	KHGGMAIHSQFVNSISG	47	M	AB030896.1	1 ... 906
1002	OR10Jn P	1			LLGVCGITIQSTISVLL	60	M	X92969.1	8035 ... 8961
1003	OR52En	0	11	4.58	MHTASIRMP LLGNILL	71	M	AF121979.1	53 ... 1106
1004	OR4RnP	24	11		VHGAIMGHVXS FANNCL	54	M	AF102522.1	40 ... 660
1005	OR4Cn	0	11		AHGAIVGHIQFVNSICL	75	M	AF102522.1	40 ... 660
1006	OR4AnP	10	11		GLGGIVGHIQL.....	44	M	AF102522.1	40 ... 660
1007	OR4AnP	4	11		LHGGVAGHFQVVG GCI	55	M	AB030895.1	1 ... 924
1008	OR4AnP	8	11		LHGGVAGHSHSVNGICV	54	M	AF102522.1	40 ... 660
1009	OR9Gn	0	11	52.54	FAAYCVGNI IKMLLNVC	46	M	AC074177.4	106297 ... 105361
1010	OR10An	0	12	59.65	MFGSCGSVLQWASTFIF	64	M	AF247657.1	1 ... 945
1011	OR4Cn	0	11		VHRGVVGHIQFINSICL	73	M	AF102522.1	40 ... 660

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
1012	OR10Vn P	8	11	56.15	.FFFFIIXNEXSVVVLV	37	M	AC073945.4	110931 ... 111893
1013	OR10Un P	3	12	59.65	MAGLCATVAQLMLSFIS	56	R	AF034898.1	1 ... 981
1014	OR7E2P	3	11	90.37	MVACDVLDLHICDIFGL	59	M	AF073989.1	547 ... 1515
1015	OR7E35 P	6	4	11.87	MAGGEFLDLHIVPAFVL	53	M	AF102536.1	22 ... 669
1016	OR9KnP	0	12	59.71	LAIVGGCSLQVSLSIIP	49	R	AF091579.1	7 ... 663
1017	OR7E13 P	5	11	90.37	MAGGEFLDLHIMLAFGL	54	R	AF091580.1	7 ... 663
1018	OR7EnP	4	8	6.5	MLACGVLDLHIIDSFGL	55	M	AF102536.1	22 ... 669
1019	OR9Kn	0	12	59.71	LAIVGGCSIQMSLSIIP	49	M	NM_013728. 1	1 ... 948
1020	ORnP	13	11	137.56	PCVIYGIDVHSLXEPAY	34	M	AC069559.8	36251 ... 35322
1021	OR7EnP	8	11	72.11	MAGGNLFFSLLMPAFGL	54	M	AF073989.1	547 ... 1515
1022	OR7EnP	5	3	140.64	MAGGKFLDLHIMPAFGL	53	M	AF073989.1	547 ... 1515
1023	OR3A4P	0	17	3.12	LHAGCMFNTQALAAMGA	44	M	AC073769.1	133488 ... 132556
1024	OR8QnP	9	11	137.56	LSIIIVETEFVFTXIVT	33	M	AC069559.8	137090 ... 138039
1025	OR7EnP	2	11	72.11	ILACGVLDLHIMHNFGGL	55	M	AF073989.1	547 ... 1515
1026	OR7EnP	3	3	140.64	MVACGVLDLHIIHSFGL	56	M	AF073989.1	547 ... 1515
1027	OR3A1	0	17	3.07	LHVGCACNTHALVGMAT	50	M	AF073967.1	2 ... 649
1028	OR5Gn	0	11	52.52	MGEACGMSTHFLLAIGL	69	M	AF146372.1	509 ... 1456
1029	OR5MnP	7	4	42.45	LIIIVVYNAQRRIIMLE	39	M	AF073987.1	2 ... 649
1030	OR7EnP	1	3	136.02	MVACDVLDLHIIDNFGGL	54	M	AF073989.1	547 ... 1515
1031	OR5G1P	2	11	52.51	QGVACGINTHNVVAVGF	68	M	AF146372.1	509 ... 1456
1032	OR5PnP	3	11	6.93	LVGTCAGNSFCPSSVLS	70	M	AF121977.1	262 ... 1197

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
1033	OR10AEnP	8	1	157.36	IIIIIGIMVIVQIHCVV	40	M	X92969.1	8035 ... 8961
1034	OR3A2	0	17	3.07	LHAGCACNTHALVGMAT	50	M	AC073769.1	133488 ... 132556
1035	OR10Jn	0	1	157.4	MVATCGIMLHANVSVIV	88	M	X92969.1	8035 ... 8961
1036	OR1D3P	2	17	2.94	LVVANLFYIHLTGIFI	50	R	Y07557.1	1 ... 942
1037	OR10Jn	0	1	157.36	TVAICGIMVQSNVRVIV	72	M	X92969.1	8035 ... 8961
1038	OR1D4	0	17	2.99	LVVTNLLYLLLTGIFT	49	R	Y07557.1	1 ... 942
1039	OR5GnP	8	11	52.51	QGVVYVANTHAVVAVLV	55	M	NM_013728.1	1 ... 948
1040	OR4SnP	1	11	50.99	LHGCIGGHIQLVNSIAG	61	M	AB030895.1	1 ... 924
1041	OR5GnP	4	11	52.51	LGVVCGVSTHFLVLGL	75	M	AF146372.1	509 ... 1456
1042	OR9HnP	2	1	254.35	FSGIAGWNAQMLLCIIS	59	R	AF091579.1	7 ... 663
1043	OR1A1	0	17	2.99	MIGNSGINPHLMGVIFV	86	M	AF073966.1	41 ... 643
1044	OR1A2	0	17	2.99	MIAKSGISPHMLGVFL	80	M	AF073966.1	41 ... 643
1045	OR8AnP	6	11	137.68	FLVICVMVIELVFANLI	50	M	AC069561.10	51687 ... 50743
1046	OR1P1P	1	17	2.99	LLGDIALLTRLLLGVII	82	M	AF102538.1	139 ... 675
1047	OR7E12P	7	11	1.92	MAGGEFFSLHIMPAFGL	55	M	AF073989.1	547 ... 1515
1048	OR4A1P	4	11		LHGGVVGHFQVNGICV	57	M	AB030896.1	1 ... 906
1049	OR10G3	0	14	1.7	LHGSCGAHLQLTDIVVS	91	M	AF259072.1	19582 ... 18644
1050	OR10G1P	3	14	1.7	LHGSCGAHIQLTDIVAS	93	M	AF259072.1	55611 ... 54658
1051	OR10G2	0	14	1.7	LHGSCGAHIQLTDIVAS	91	M	AF259072.1	55611 ... 54658
1052	OR5Tn	0	11	51.94	MVGTCAAHIHALFVIEV	52	M	AF121977.1	262 ... 1197
1053	OR7EnP	8	3	136.02	MVACGVLDLHIIGSFGL	53	R	AF091580.1	7 ... 663
1054	OR7EnP	5	3	136.02	MAGGKFLDLHIMPAFGL	54	M	AF073989.1	547 ... 1515
1055	OR4AnP	2	11	50.93	LHAGVVGHVQFMNGICV	61	M	AB030895.1	1 ... 924
1056	OR4C1	1	11	50.93	LHGGIIGHVQFVNSMCL	66	M	AB030896.1	1 ... 906

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
1057	OR1EnP	7	17	2.9	.....MMMYTLIMGILI	80	M	AF073961.1	32 ... 649
1058	OR7KnP	11	14	5.99	MIGCNFIELYMMIGIFG	49	R	AF091580.1	7 ... 663
1059	OR4CnP	3	11	50.93	LHDGIEGHIQFVNSMCA	61	M	AF102522.1	40 ... 660
1060	OR1RnP	11	17	2.9	MVGISAVHLHLIEGVVA	44	R	M64377.1	1 ... 939
1061	OR5AUn	0	14	1.22	MAATCGANIHCFLFANLS	51	M	AC069559.8	85584 ... 84655
1062	OR4Cn	0	11	50.96	LHAGVVGHIQFVNSICI	69	M	AF102522.1	40 ... 660
1063	OR4Cn	0	11	50.96	VHGCIVGHVQLLSICV	57	M	AB030895.1	1 ... 924
1064	OR13Dn P	2	9	86.89	MLGSCWITLRLFTVIVL	58	M	AJ251154.1	2703 ... 1747
1065	OR5n				ASASLTSYVHNEEEVFV	44	M	AL359352.1	111313 ... 112242
1066	OR2Hn				LLGTCVMQVQSLSSLVV	83	M	AL078630.1	48786 ... 47851
1067	ORn				.....	25	M	AC074177.4	88434 ... 88916
1068	ORn				.....EINLLLARGKAL	29	M	AF283814.1	1 ... 930
1069	ORn				NNNNNFXXSLHLCCCILI	29	M	AC074177.4	128803 ... 129726
1070	ORn				TLLLLTFQHHL.....	27	M	L14569.1	62 ... 667
1071	OR6Fn				..CCCWPIPTSAIAVIS	46	R	M64386.1	130 ... 975
1072	ORn				.....ILLLLL	33	R	U50947.1	418 ... 1350
1073	ORn				..CCCLIPFFFTSGYSW	24	R	M64392.1	1 ... 942
1074	OR10An				PLGECDPPEEQMYVGLVM	51	M	AF247657.1	1 ... 945
1075	ORn				IPNASRRRRRR....PP	25	R	M64388.1	1 ... 942
1076	OR2Ln				FLAGAGINAHYVSTFLF	51	M	AF102527.1	22 ... 669
1077	OR10Jn				LTGICGIMVQSNVSVLL	57	M	X92969.1	8035 ... 8961
1078	OR1Kn				LLLLLMVNLYLIKGVVT	50	R	M64377.1	1 ... 939
1079	OR10Dn				LHGSCGLHILLSNVISG	69	M	AC074177.4	12106 ... 13038
1080	ORn				.....CCCI II	41	R	M64376.1	1 ... 999

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
1081	OR2Ln				SLACGGLNAHFVRTLSF	52	M	AF102537.1	16 ... 669
1082	ORn				HHHHHRLESSLLLLLL	38	M	AC073945.4	152209 ... 153150
1083	ORn				.....LLLLLS	27	M	AL365336.1	41087 ... 41711
1084	OR2n				.....GGGGGG	57	M	AF102521.1	22 ... 669

5 Although the foregoing invention has been described in some detail by way of illustration and example for purposes of clarity of understanding, it will be apparent to those skilled in the art that various changes and modifications can be practiced without departing from the spirit of the invention. Therefore the foregoing descriptions and examples should not be construed as limiting the scope of the invention.

10

 All patents, patent applications, and publications cited herein are hereby incorporated by reference in their entirety. In particular, the following documents are hereby incorporated by reference in their entirety: United States Provisional Patent Applications Serial Nos. 60/145,412, filed July 23, 1999; 60/155,126, filed September 22, 1999; 60/158,495, filed October 8, 1999; 60/158,615, filed October 8, 1999; 60/181,113, filed February 8, 2000; 60/181,115, filed February 8, 2000; 60/184,809, filed February 24, 2000; 60/188,332, filed March 9, 2000; and United States Patent Applications Serial Nos. 09/620,753, filed July 21, 2000; and 09/621,122, filed July 21, 2000.

CLAIMS

What is claimed is:

- 5 1. An isolated and purified polynucleotide sequence encoding an olfactory receptor and having the nucleotide sequence selected from the group consisting of SEQ ID NO:1 through SEQ ID NO: 73 and SEQ ID NO:111 through SEQ ID NO:152, or a nucleotide sequence that is at least about 95% homologous to a nucleotide sequence of the group consisting of SEQ ID NO:1 through SEQ ID NO: 73 and SEQ ID NO:111 through
10 SEQ ID NO:152 and encoding a polypeptide having olfactory receptor function.
2. An expression vector comprising a polynucleotide sequence of claim 1.
3. A host cell comprising the expression vector of claim 2.
- 15 4. An isolated and purified olfactory receptor polypeptide comprising the translated sequence of SEQ ID NO:1 through SEQ ID NO: 73 and SEQ ID NO:111 through SEQ ID NO:152, or a polypeptide sequence that is at least about 95% homologous to a polypeptide sequence of the group consisting of the translated sequence of SEQ ID
20 NO:1 through SEQ ID NO: 73 and SEQ ID NO:111 through SEQ ID NO:152 and having olfactory receptor function.
5. A host cell expressing a polypeptide of claim 4 or a functional fragment thereof.
- 25 6. A phage expressing a polypeptide of claim 4 or a functional fragment thereof.
7. A preparation containing a polypeptide of claim 4, further comprising
30 biological or synthetic molecules which maintain the functional structure of the polypeptide.

8. An isolated and purified polynucleotide sequence encoding an olfactory receptor and having the nucleotide sequence selected from the group consisting of SEQ ID NO: 153 through SEQ ID NO: 1084 or a nucleotide sequence having a sequence at least about 95% homologous to a nucleotide sequence of the group consisting of SEQ ID NO: 153 through SEQ ID NO: 1084 and encoding a polypeptide having olfactory receptor function.
9. An expression vector comprising a polynucleotide sequence of claim 8.
10. A host cell comprising the expression vector of claim 9.
11. An isolated and purified olfactory receptor polypeptide comprising the sequence of SEQ ID NO: 1085 through SEQ ID NO: 2008, or a polypeptide sequence that is at least about 95% homologous to a polypeptide sequence of the group consisting of SEQ ID NO: 1085 through SEQ ID NO: 2008 and having olfactory receptor function.
12. A host cell expressing a polypeptide of claim 11 or a functional fragment thereof.
13. A phage expressing a polypeptide of claim 11 or a functional fragment thereof.
14. A preparation containing a polypeptide of claim 11, further comprising biological or synthetic molecules which maintain the functional structure of the polypeptide.
15. A library of olfactory receptors suitable for determining the interaction pattern of a composition with the receptors, comprising the expression products of at least two polynucleotides of SEQ ID NO: 1 through SEQ ID NO: 73, SEQ ID NO: 111 through SEQ ID NO: 152, and SEQ ID NO: 153 through SEQ ID NO: 1084 wherein said polynucleotides encode functional olfactory receptors; or functional fragments of said expression products.

16. A library of olfactory receptors according to claim 15, wherein the library comprises the expression products of at least 50 polynucleotides of SEQ ID NO:1 through SEQ ID NO: 73, SEQ ID NO:111 through SEQ ID NO:152, and SEQ ID NO: 153 through
5 SEQ ID NO: 1084 wherein said polynucleotides encode functional olfactory receptors; or functional fragments of said expression products.

17. A library of olfactory receptors according to claim 15, wherein the library comprises the expression products of at least 100 polynucleotides of SEQ ID NO:1 through
10 SEQ ID NO: 73, SEQ ID NO:111 through SEQ ID NO:152, and SEQ ID NO: 153 through SEQ ID NO: 1084 wherein said polynucleotides encode functional olfactory receptors; or functional fragments of said expression products.

18. A library of olfactory receptors according to claim 15, wherein the library
15 comprises the expression products of at least 200 polynucleotides of SEQ ID NO:1 through SEQ ID NO: 73, SEQ ID NO:111 through SEQ ID NO:152, and SEQ ID NO: 153 through SEQ ID NO: 1084 wherein said polynucleotides encode functional olfactory receptors; or functional fragments of said expression products.

20 19. A library of olfactory receptors according to claim 15, wherein the library comprises the expression products of at least 500 polynucleotides of SEQ ID NO:1 through SEQ ID NO: 73, SEQ ID NO:111 through SEQ ID NO:152, and SEQ ID NO: 153 through
25 SEQ ID NO: 1084 wherein said polynucleotides encode functional olfactory receptors; or functional fragments of said expression products.

20. A library of olfactory receptors suitable for determining the interaction pattern of a composition with the receptors, comprising at least two polypeptides of SEQ ID NO: 1085 through SEQ ID NO: 2008, wherein said polypeptides are functional
30 olfactory receptors; or functional fragments of said polypeptides.

21. A library of olfactory receptors according to claim 20, wherein the library comprises at least 50 polypeptides of SEQ ID NO: 1085 through SEQ ID NO: 2008,

wherein said polypeptides are functional olfactory receptors; or functional fragments of said polypeptides.

22. A library of olfactory receptors according to claim 20, wherein the library
5 comprises at least 100 polypeptides of SEQ ID NO: 1085 through SEQ ID NO: 2008,
wherein said polypeptides are functional olfactory receptors; or functional fragments of
said polypeptides.

23. A library of olfactory receptors according to claim 20, wherein the library
10 comprises at least 200 polypeptides of SEQ ID NOS of SEQ ID NO: 1085 through SEQ
ID NO: 2008, wherein said polypeptides are functional olfactory receptors; or functional
fragments of said polypeptides.

24. A library of olfactory receptors according to claim 20, wherein the library
15 comprises at least 500 polypeptides of SEQ ID NO: 1085 through SEQ ID NO: 2008,
wherein said polypeptides are functional olfactory receptors; or functional fragments of
said polypeptides.

25. A method for determining the binding pattern of a composition with
20 olfactory receptors, comprising the steps of:
exposing the composition to a library according to claim 21; and
determining whether the composition binds to each olfactory receptor, thereby
determining the overall binding pattern of the composition.

26. The method of claim 25, wherein the composition consists essentially of one
25 compound or chemical.

27. The method of claim 25, wherein the composition comprises at least two
30 compounds or chemicals.

28. The method of claim 25, wherein the step of determining whether the
composition binds to each olfactory receptor further comprises a determination of the

approximate binding constant with which the composition binds to each receptor or functional fragment thereof.

29. The method of claim 25, further comprising the step of determining whether
5 a receptor or functional fragment thereof to which the composition binds is activated.

30. The method of claim 29, further comprising the step of determining the absolute or relative amount by which the receptor or functional fragment thereof is activated.

10

31. A DNA array or a DNA chip comprising DNA segments derived from SEQ ID NO: 153 through SEQ ID NO: 1084.

32. A method of determining differences among individuals with respect to their
15 olfactory faculties, comprising the steps of comparing the olfactory DNA of the individual against the array or chip of claim 31.

33. A method to determine single nucleotide polymorphisms in olfactory receptors, comprising the steps of uniquely amplifying olfactory receptor sequences from DNA
20 obtained from one or more individuals, based on primers designed according to the first 25 bases and the last 25 bases of any combination of, or each of, SEQ ID NO: 153 through SEQ ID NO: 1084, and determining the similarities and differences between said amplified DNA and the corresponding receptor from SEQ ID NO: 153 through SEQ ID NO: 1084.

FIGURE 1

SEQ. ID NO:1

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1  GGNNTTATNCC NCGTTGNACT GCAGGGGNNC AACNCACAGN ACGCCCGNTG CTGAGGCTAT AAATGANCGG
71 NTTAAGGAGA GGAGTGAAGA CAGTAAAAAA ACACAGAGAT AAATTTATCA ATTGGGAAGC TTTCAAAGGG
141 CCAAATATAG ATGAATATTA ATGGGCCAAA GAAGAGAAGC ACAACAGTAA TGTGGGCAGA CAGAGTGGAA
211 AGGGCCTTGG ACATCCCATC AGAGGCTTGG CGATGCACAG TAGCAAGGAT GATAGTGTCA GAAATGAGCA
281 AAAGGAGGAA ACACATAAGT GAGAGCAGAC CACTGTTAGT GAGCACCAGT ATCTCAAAAC CATAGGTGTC
351 TAAGCAGGCA AGCTTGATCA CTAGGAGGAG GTCACAGAAA AAATTGTCTA CCCTGTTGGG TCCACAGAAA
421 GGCAGATTGA CTTTGAATGC CAGGTGGGTG GCTGAGTGTG AGATGCCAAT GGCCCAAGAA ACCCCCACCA
491 GAACAGTTCA CACCCTCCGG TTCATGATGG TTATGTAGTG CAGAGGTTTG CATATAGCAA TGTATCTATC
561 ATAGGCCATG GCAACAAGAA GCACCATCTC ACTACCCCCA AAAACATGCA AGN

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SEQ. ID NO:2

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1  GGNNTTNAC ACGGACTCCA AGCAGTGGTA ACAACGCAGA GTACGCCCGT TCCTGAGTGA GTAGATGAAG
71 GGGTTCAGCA TGGGATTGAT GACAGTGTG AAAATTCCAA CAGCTTTATC CTTGTCTGAA AGCTTGGTTG
141 AACCAGTCG CATATAGTTA AAGATACCTG AACCATAGAA TATGGCAACC ACAGTGAGGT GGGAGCCACA
211 TGTGGAGAAG GCTTTCTTCC TGCCCTCTAC AGAGCGAATT CGCAGGACTG CAGCTGCCAC GTGGATATAG
281 GAGATGACAA TGAGAGCCAT GGGGGTACCT GCCATTATAA AACCACAGC AAAAAGCAGC AGCTCATTGA
351 GTTGGGTGCT GGAGCAGGAG AGCTGGAAGA GCTGTGGGAG GTCACAGTAG AAGTGATTGA TCACATTGGG
421 GCCACAGAAG TTGAGCGTGG ACATGGCCAC AGTGTGGGTC AGTGCCTTGG TGAAAGCACA AGCCCAGGAC
491 GCAGGCCACCA ACATCCTCTG GACTGTCTGA CTCATGCGGG TGCTTGTAGG TGAGGGGCCC GGCAGATGGG
561 CAGGAATCGG TCATAGGG

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SEQ. ID NO:3

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1  TGGNNTTTTA TCNCCNTTGG AGCTCCNAAG CAGTGGTAAC AACGCAGAGT ACGCCCGTTG CGAAGCGTGT
71 AGATTAGGGG GTTCAGTAGG GGAGTGATGA CAGTGTAGGT CACCGAGATC AGCTGGTCAT GTTCTCTGGT
141 GTTCTCTGAC TTGGGCTTGA GGTAGGCAAT GGAGGCACAG CTGTAGTGGA CAATGACCAC AGTGAGGTGG
211 GATGCACAGG TGGCAAAAGC CTCTTCCGG CCCTCAACTG AAGTAATCTT GAGGATTGTA GAGATAATGA
281 GAACATAAGA AATGAAAACC AGACCCATAG GTACAACAAG CACCAGCACA CTGATAATCA AAGTCAGGAT
351 TTCATTGACA GTGGTGTCAA TGCAGGAGAG CTTCATCACA GGGCGGATGT CACAGAAGAA GTGGGGCACC
421 TTTTCTAGCA CAGAAGGGTA ACCTGAATAC AGATGTCACT TGCCTTATTG CTACAATCAG CCCAATGCTG
491 CAAGGCCCCC AGGACAAGTT GGATACGCAG CCTCTTGTTT ATAATAACCA TGTATCTCAA GGGGGTTGCA
561 AGATGGCCAC ATAGCNGNTC ATATTCCN

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SEQ. ID NO:4

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1  GTNGTTNNTA ACNCCATTGG AGCTCCAAAG CAGTGGTAAC AACGCAGAGT ACGCCCCCAA TGTATTTTTT
71 TTTGAGAAAC TTGTCTTTCT TAGATTTTTG TTACATCTCT GTCACAATTC CAAAATCTAT TGTTAGTTCC
141 TTGACTCATG ATACTTCCAT TTCTTTCTTT GGGTGTGCTC TGCAAGCCTT CTTTTTCATG GACTTGGCAA
211 CTACGGAGGT AGCCATCCTT ACAGTGATGT CCTGTGACCG CTATATGGCC ATCTGCCGGC CTTTACATTA
281 TGAGGTCATC ATAAACCAAG GTGTCTGTCT GAGGATGATG GCCATGTCGT GGCTCAGTGG GGTGATCTGT
351 GGATTCATGC ATGTGATAGC AACATTCTCA TTACCATTCT GTGGGCGCAA TAGAATACGT CAATTTTTCT
421 GTAATATTCC ACAACTNCTA AGCCTCTTAG ACCCCAAAGT AATTACCATT GAGATTGGAG TCATNGGNTT
491 TTGGTACAAG TCTTNGATA ATCCTCTTTG NTGNAATTAC TCTCTCCTAC ATGTNCATTT TTTTTTGNCA
561 TCATGAGGGA TTCCTCTAA AGG

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SEQ. ID NO:5

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1  GNGGNTTNNNT NCCNCCNTTG GACTCCAAAG CAGTGGTAAC AACGCAGAGT ACGCCCGTGT GTAAATGAAT
71 GGGTTCAACA TGGGAGTCAT AACAGTGTAG GACAATGATA GCAGCTTCGT GCCCTCAGGT GAATTATTTG
141 ATTTAGGCCG GAAGTAGGTG AGGCTTAATG ATATATAGAA AAGAGAGACA ACAAGGAGGT GTGAGGAACA
211 TGTAGAAAAG GCTTTATTCT TCCCTTTAGC TGATGGGATC TTGAGGATGG CAGCAGCAAT GCGAGTATAG
281 GAACACAAGA TCAGCAAGCA GGGGATCATG ACCACCAGAA TGGTTCCGAC GATGGCGTAG ATCTCAAACA
351 GTGCTGTGTC TGCACAGACC AGCCTCAGCA CAGGTGGGCT GTCACAGAAG AAGTGGTTCA CTTGTTGGT
421 GCCACAGAAT GGAAAACTGA AGAGCCATGT GGTCTGCACA GTAGCTACAG GAAAGCCTGG GAACCAGGAG
491 GCAGCAGCCA GTTTGGCAGC AGTCCTTTGG TTCATGATGA CTGGGTAGTG CAAGGGACTN GCAGATNNNC

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561 NCATTGCGTC ATATGNCATG GNAG

SEQ. ID NO: 6

1	CNTTGGAGCT	CCAAAGCAGT	GGTAACAACG	CAGAGTACGC	CCGCTCCGCA	GAGAATAGAT	GAAAGGGTTC
71	AGGGTCGGGG	GCACGACTGT	GTAGAACGCA	GACAGGAAAA	CATCCAGAAC	GGGGGGAGAA	TTTGAAATTG
141	GCTTCACATA	GGCAATGCTG	CCAGATATCA	TAAAGAGTGT	TACAACCACA	AGATGTGGAA	TGCAGGTAGA
211	AAATGTTTTT	GATCTACCCCT	CCTTAGAAGG	AATCCTCATG	ATGACAGAAA	AAATGTACAT	GTAGGAGAGA
281	GTAATTACAA	CAAAGGAGAT	TATCACAAGA	CTTGTAACCA	AAACCATGAC	TCCAATCTCA	ATGGTAATTA
351	CTTTGGGGTC	TAAGAGGCTT	AGGAGTTTGT	GGAATATTAC	AGAAAAATTG	ACGTATTCTA	TTGCGCCAC
421	AGAATGGTAA	TGAGAATGTT	GCTATCACAT	GCATGAATCC	ACAGATCACC	CCACTGAGCC	ACGACATGGC
491	CATCATCCTC	AGACAGACAC	CTTGGTTTAT	GATGACCTCA	TAATGTAAAG	GCCGGCAGGA	TGGCCATATA
561	GCGGTCATAG	GA					

SEQ. ID NO: 7

1	GCAGTGGTAA	CAACGCAGAG	TACCGCCCCC	TATGTACTTT	TTCTTGGGAA	ACTTGTCTGT	GTTTGACATG
71	GGTTTCTCCT	CAGTGACTTG	TCCCAAAATG	CTGCTCTACC	TTATGGGGCT	GGGCCGACTC	ATCTCCTACA
141	AAGACTGTGT	CTGCCAGCTT	TTCTTCTTCC	ATTTCTCTCG	GAGCATTGAG	TGCTTCTTGT	TTACGGTGAT
211	GGCCTATGAC	CGCTTCACTG	CCATCTGTTA	TCCTCTGCGA	TACACAGTCA	TCATGAACCC	AAGGATCTGT
281	GTGGCCCTGG	CTGTGGGCAC	ATGGCTGTTA	GGGTGCATTC	ATTCCAGTAT	CTTGACCTCC	CTCACCTTCA
351	CCTTGCCACA	CTGTGGTCCC	AATGAAGTGG	ATCACTTCTT	CTGTGACATT	CCAGCACTGT	TGCCCTTGGC
421	CTGTGCTGAC	ACATCCTTAG	CCCAGAGGGT	GAGCTTCACC	AACGTTGGCC	TCATATCTCT	GGCTGCTTTC
491	TGCTAAATCT	TTTATCCTAC	ACTAGAATCA	CAAATATCTA	TCTTAAGCAT	TCGTACAAC	

SEQ. ID NO: 8

1	GGAACAACGC	AGAGTCGCCC	CCGATGTACT	TGTTCTTCTC	CAACCTGTCC	TTTGCTGACA	TTTGTGTTAC
71	TTCCACCACC	ATTCCAAAAA	TGCTGATGAA	CATCCAGACA	CAGAACAAAG	TCATCACCTA	CATAGCCTGC
141	CTCATGCAGA	TGTATTTTTT	CATACTCTTT	GCTGGATTGT	AAAACCTCCT	CCTGTCCGTG	ATGGCCTATG
211	ACCGGTTTGT	GGCCATCTGT	CACCCCTGCG	ACTACATGGT	CATTATGAAC	CCTCACCTCT	GTGGACTGCT
281	GGTTCTGGCA	TCCTGGACCA	TGAGTGCTCT	GTATTCCCTG	CTACAAATCT	TAATGGTAGT	ACGACTGTCC
351	TTCTGCACAG	CCTTAGAAAT	CCCCCACTTT	TTCTGTGAAC	TTAATCAGGT	CATCCAACCT	GCTTGTCTGT
421	ATAGCTTTCT	TAATCACATG	GTGATATATT	TTACAGTTTG	CGCTGCTGGG	TGGAGGTCCC	TGACTGGGAT
491	CCTTTACTTC	TTACTCTAAG	ATAATTTCTT	CATACATGCA	ATCTCANCAA	GNTCAGGG	

SEQ. ID NO: 9

1	GGGTTTTNAC	CCNNTNGGAG	CTCCNAGCAG	TGGTAACAAC	GCAGAGTACG	CCCGTTTCGT	AGGCTATAAA
71	TGAAGGGGTT	GAGTGAGGGA	GTCACCACTC	CATAGAAGAG	GGCCATGAAC	TTGGGTGATG	CCCTTGAGAT
141	GGAGGAGGGG	GGCTGAAGGT	ACATGCTGAT	GGCTGGGCCA	TAAAATAAGA	AAACTACAAT	AAGATGGGAG
211	GAGCATGTCC	CAAAGGCCCT	TNTCCTTCCC	TTGGAAGATT	TGATCTTAAA	TACAGCACTT	NCAATACTAG
281	CATAGGAAGC	AAGAATTAAAG	CATANTGGGA	CAGCTAACAT	AAAAATGCAT	ACCACAGAGA	GTGTGAGCTC
351	GTTAGAACCC	TTTTTACCAC	AGGCAATCTT	TATCAGAACA	GGAATCTCAC	ACACCAAGTG	GTCCAGCTTA
421	TTGAGACCAC	ACAGTGGNAA	TTTGTATTGT	GGCAGTGGCC	CTCTGAGAAC	GGCATAGATT	ATACCAANTT
491	AACCACNACN	GCGGNAACTA	ANGATTGAGA	CGCNCTGGAT	TCATGATGAG	GGTNTAGTGA	AGAGGTTNTC
561	AGAATGGCCA	CATACCGNTC	AAA				

SEQ. ID NO: 10

1	GCTGCTNCCA	GCAGTGGTAA	CAACGCANAG	TACGCCCCCA	ATGTATTTGT	TCTTCGGCCA	TCTGTCTCTC
71	CTGGATGTCT	GCTTCATCAC	CACTACCATC	CCACAGATGT	TGATCCACCT	CGTGGTCAGG	GACCACATTG
141	TCTCCTTTGT	ATGTTGCATG	ACCCAGATGT	ACTNTGTCTT	CTGTGTTGGT	GTGGCCGAGA	GCATCCTCTT
211	GGCTTTTCATG	GCCTATGACC	GNTATGNTGC	TATCTGCTAC	CCACTTAACT	ATGTCCCGAT	CATAAGCCAT
281	AAGGTCTGTG	TCAGGCTTGT	GGGAAC TGCC	TGGNTCTTTG	GGCTGATCAA	TGGCATCTTT	NTCGGGTATA
351	TTTCATTCTC	AGAGCCCTTC	CGCAGAGACA	ACCACATAGA	AAGCTTCTTC	TGCGAGGCC	CCATAGTGAT
421	TTGGCCTCTT	TTGTGGGGGA	CCCTNANANT	AGTCTGTGGG	CAAACTTTTN	GCCGATGCCA	TCGTGGTAAT
491	TCTNAGNCCC	ATNGGTGCTN	ACTGNTACTT	ACCTATNTGC	ACATTCCCTGT	CCACCATCCT	AGNNAAAGTC
561	CTCCTTCTN						

SEQ. ID NO: 11

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1 GGNNTTTTAC CNCNATTGGA GCTCCAAAGC AGTGGTAACA ACGCAGAGTA CGCCCCCTAT GTACTTGTTT
71 TTGAGAAACT TGTCTTTCTT AGATTTTGT TACATCTCTG TCACAATTCC AAAATCTATT GTTAGTTCCT
141 TGACTCATGA TACTTCCATT TCTTTCTTTG GGTGTGCTCT GCAAGCCTTC TTTTTCATGG ACTTGGCAAC
211 TACGGAGGTA GCCATCCTTA CAGTGATGTC CTATGACCGC TATATGGCCA TCTGCCGGCC TTTACATTAT
281 GAGGTCATCA TAAGCCAAGG TGTCTGTCTG AGGATGATGG CCATGTCGTG GCTCAGTGGG GTGATCTGTG
351 GATTCATGCA TGTGATAGCA ACATTCTCAT TACCATTCTG TGGGCGCAAT AGAATACGTC AATTTTCTG
421 TAATATTCCA CAGCTCCTAA GCCTCTTAGA CCCCAGTA ATTACCATTG AGATTGGAGT CATGGTTTTT
491 GGTACAAGGC TTGNGATAAT CTNCTTTGGT GNAATTACTC TCTCCTACAT GTACATTTTT TCTGCATCAT
561 GAGGATTCCCT TCTAAGGAGG GG

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SEQ. ID NO:12

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1 GGNNTTGGAC ACGGAGCTCC AAGCAGTGGT AACAAACGAG AGTACGCCCT CTTGTCCTCG TGCCGATACA
71 TGATGGGGTT CAACATGGGA GTCATAACAG TGTAGGACAA TGATAGCAGC TTCTTGCCCT CAGGTGAATT
141 ATTTGATTTA GGCCGGAAGT AGGTGAGGCT TAATGATATA TAGAAAAGAG AGACAACAAG GAGGTGTGAG
211 GAACATGTAG AAAAGGCTTT ATTCTTCCCT TTAGCTGATG GGATCTTGAG GATGGCAGCA GCAATGTGAG
281 TATAGGAACA CAAGATCAGC AAGCAGGGGA TCATGACCAC CAGAATGGTT CCGACGATGG CGTAGATCTC
351 AAAGAGTGCT GTGTCTGCAC AGACCAGCCT CAGNACAGGT GGGCTGTAC AGAAGAAGTG GTTCACCTTG
421 TTGGTGCCAC AGAATGGAAA ACTGAAGAGC CATGTGGTCT GCACAGTAGC TACAGGAAAG CCTGGGAACC
491 AGGAGGTAGC AGCCAGTTTG CACGAGTCCC TTTGGTTNAT GAATGACTGG GGTAGTGCAA GGGACTGCAG
561 ATGGCCACAT ANCGGTCNT

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SEQ. ID NO:13

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1 GNNNTNNNN CCACTGGAGC TCCAAAGCAG TGGTAACAAC GCAGAGTACG CCCCCAATGT ATTTATTCTT
71 GCTCACCTCT CCTTAGTTGA TATCTGTTTT ACCACCAGTA TTGTCCCCCA GCTGCTGTGG AACCTAAAAG
141 GACCTGACAA AACAAATCACA TTCCTGGGTT GTGTCATCCA GCTCTACATC TCCCTGGCAT TGGGCTCCAC
211 TGAGTGTGTC TCCTGGGCTG TAATGGCTTT TGATCGCTAT GCTGCAGTTT GCAAACCTCT CCACTATACC
281 GCCGTAATGA ACCCTCAGCT GTGCCAGGCT CTGGCAGGGG TTGCGTGGCT GAGTGGAGTG GGAAACACTC
351 TTATCCAGGG CACTGTCACC CTCTGGCTTC CTCGCTGTGG ACACCGATTG CACTAACATT TCTTCGTGAG
421 GTACCCCTCA TGATTAAGCT TGCATGTGTG GACATCCATG ATAATGAGGT TCAGCTCTTT GTTGCTTCAC
491 TGGTCTTGCT CCTCTTGCCC TTAGTGCTAA TACTGCTGCC TATGGACATA TAGCCAAGGT GGCATAAGGA
561 TCAAGTCAGT CCAGCCT

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SEQ. ID NO:14

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1 GNNNTNNAC TCCATGGACT CCAAGCAGTG GTAACAACGC AGAGTACGCC CATACTGAT GGGGTTCACT
71 AGGGGAGTGA TGACAGTGTA GGTCACCGAG ATCAGCTGGT CATGTTCTCT GGTGTTCTCT GACTTGGGCT
141 TGAGGTAGGC AATGGAGGCA CAGCTGTAGT GGACAATGAC CACAGTGAGG TGGGATGCAC AGGTGGCAAA
211 AGCCTTCTTC CGGCCCTCAA CTGAAGCAAT CTTGAGGATT GNAGAGATAA TGAGAACATA AGAAATGAAA
281 ACCAGACCCA TAGGTACAAC AAGCACCAGC ACACTGATAA TCAAAGTCAG GATTTTCATTG ACAGTGGTGT
351 CAATGCAGGA GAGCTTCATC ACAGNGCGGA TGTCACAGAA GAAGTGGGGC ACCTTTCTAG CACAGAAGGG
421 TAACCTGAAT ACAGATGTCA CTTGCGTTAT TGCTACAATC AGCCCAATGC TGCNGCCCCC CAGGACAAGT
491 TGGATACGCA GCCTTNTCGT TCTANTAACC ATGTATCTCA ANGGGCTTGC NGATNNCCAC ATACTNGCAT
561 ANACCATTCG TGNGAGC

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SEQ. ID NO:15

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1 GNCNNTNTTA ACNCCATTGG AGCTCCAAAG CAGTGGTAAC AACGCAGAGT ACGCCCATTA CGAAAAGTGT
71 AGATGAAGGG GTTCAAGAGG GGTGTGATGA TGCAGCTCAG GACGGAGGCA CCTTTGTTGA GCAGTTTGA
141 CTGAGCCTCT GACATACGAA TGTAAGAAA GATGGAAGT CCATAGATGA TGACCACCAC TGTAAGATGC
211 GAGGCGCAAG TGGAAAACGC TTTCCTTCGC TCAGCAGCTG TAGGGGCCCT GAGAACAGTG GCAAGAATGC
281 AGGCATAGGA AACTGAGGTC AGAGCCAGTG AGCCAGTAA CACCAACGTA GAGAGCATGA AAGCCACCAG
351 TTTCAGCAGG TGGGTGTCCC CACAAGAAA CCGTGAAGG GGCCAACTGT CACGAAAAGAA GTGGTCAATA
421 CCATTGNGGC CACAGAAAAG CATGGCTGGC CATGAGGACA GTGGGGCAAA GGACCCAGAG GAATNCANCT
491 AGCCAGGAGG CCACACTAGT TTGTGAACAG ACATGGCCAT TNATTAGGGT CTCATAGCGG AGTTGTCGNC
561 AGATTTGCNT GGTNACGATT CAN

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SEQ. ID NO:16

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1 GGNNTTTTAC CNCNATTGGA CTCCAAAGCA GTGGTAACAA CGCAGAGTAC GCCCCCTATG TATTTATTCT
71 TGCTCACCTC TCCTTAGTTG ATATCTGTTT TACCACCAGT ATTGTCCTCC AGCTGCTGTG GAACCTAAAA
141 GGACCTGACA AAACAATCAC ATTCTGGGT TGTGTCATCC AGCTCTACAT CTCCCTGGCA TTGGGCTCCA
211 CTGAGTGTGT CCTCTGGCT GTAATGGCTT TTGATCGCTG TGCTGCAGTT TGCAAACCTC TCCACTATAC
281 CGCCGTAATG AACCTCAGC TGTGCCAGG TCTGGCAGG GTTGCGTGGC TGAGTGGAGT GGGAAACACT
351 CTTATCCAGG GCACTGTCAC CCTCTGGCTT CCCCCTGTG GACACCGATT GCTCCAAACAT TTCTTCGTGA
421 GGTACCCTCC ATGATTAAGC TTGCATGTGT GGACATCCAT GATAATGAGG TTCAGCTCTT TGTTGCTTCA
491 CTGGTCTTGC TCCTCTTGCC CTTAGTGCTA ATACTGCTGC CTATGGACAT ATAGCCAANG TGGCATAAAG
561 GATCAAGTCA GTCCAGG

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SEQ. ID NO:17

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1 GNNNNTTNTT CANTCCATTG GGCCCTCTAG ATGCATGCTC GAGCGGCCGC CAGTGTGATG GATATCTGCA
71 GAATTCGCCC TTATTCCGGA GGGTATACAT GAAGGGATTG GTAACCTAGC GTAACTCGA AGCCAAGAAC
141 AGAATTTCTC TTAGAAAAGA GAATTGAAAC TAAAGAGAAA GAACCTAGCA AGAAGGAAAT ATTGAATATA
211 CAAGAGAGAG GAGACAGATG ATGGAACAAAG ACTCTGAAAAG AGGTGGAAGG GATTGAATAC AATCAAAAGT
281 ATGGTGACTG CTAGTTCCAA GATGGTGGCG TAGGGGCAAG CTGGCTTTGC TTACCCCCCT GGCAGAAAAC
351 CAAAAACAAA TAGCACCAAG ATTATCACTA GCAATATCCC AGAACTCACA TATAAGGATG AGACAGTTCC
421 CAGGGCCCAG AGAAGATCAG AAGCACAAGT GGGAGAAAGT AGCTTTGGAT GCTACTTTGT TCTAAGGGAG
491 ACAAGTTGGG AGGATGATTG CAGATGTATA TTCAATGTTA TAAAACAGCC CATAAAACAA AGATTGGAAA
561 ATGTTGAATT TTGCAACCAG GAGCAAATAC TGGGAAAGGC GAATTCAGC CACTTGCNGC C

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SEQ. ID NO:18

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1 GNNNNTTNAN TCANTGCCCT NGGGCCCTCT AGATGCATGC TCGAGCGGCC GCCAGTGTGA TGGATATCTG
71 CAGAATTCGC CCTTGTGCG CAAGGTGTAA ATGAAAGGGT TTGCGCAGGA GTAAATGAAG GGATTACGCA
141 GGAGTAAATG AAGGGATTAC GCAGGAGTAA ATGAAGGGAT TACGCAGGAG TAAATGAAGG GATTACGCAG
211 GAGTAAATGA AGGGATTACG CAGGAGTAAA TGAAGGGATT ACGCAGGAGT AAATGAAGGG ATTACGCAGG
281 AGTAAATGAA GGGATTACGC AGGAGTAAAT GAAGGGATTA CGCAGGAGTA AATGAAGGGA TTACGCAGGA
351 GTAAATGAAG GGATTACGCA GGAGCAAATA CATAGGAAGG GCGAATTCCA GCACACTGGC GGCCGTTACT
421 AGTGGATCCG AGCTCGGTAC CAAGCTTGAT GCATAGCTTG AGTATTCTAA CGCGTCACTT AAATAGCTTG
491 GCGTAATCAT GGTATAGCT GTTTCCTGTG TGAAATTGTT ATCCGCTCAC AATCCACAC AACATACGAG
561 CCCGGAAGCA TAAAGTGTA AGNCTGGGGT GCCTAATGAG TGACTTACTC CATTA

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SEQ. ID NO:19

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1 GNNANTNATT CCATCCATTG TCCCTTCAGA TGCATGCTCG AGCGGCCGCC AGTGTGATGG ATATCTGCAG
71 AATTCGCCCT TCTTGGTTT TGTGCTGATA GATCATGGGA TTCAGCATGG GGGTGACCAC AGTGTACATC
141 ACTGAGGCTG TTGCACTTGA GTGTGAGTTG CGGGTGGCAG CAGAACTAAG GTACACCCCT AGGATTGCAC
211 CATAAAATAA GGAGACAAC T GAGAGGTGAG ATGCACAGGT GGAAGATGCC TTGTACTTCC CCTGAGCTGA
281 TGAGATNGCA TGTATGGAAN GAAATTATNT TANAAGTAAG AGTAAAGNAT NCCAGTCAGG GGNANCNTTC
351 ACCCATCAGN TGCAANTTGT AAAAATTATA TTCAANCNAT NTGNATTTAA NGAAAANCCT TATCANGTAN
421 AACTGCNAA GNTNTGNATT NANCCCTNGN ANTTAANNNT TCNACAAGAA AATAANGTGC GTTNNAATCT
491 TTNTAAGTCC CTNTCNCCAT TAANGTCNAN TCCNTCCNTA TCCCTTTTCN NATTTTGNAN TCNNGANTAC
561 NNTCTNNNGC NNTCNATTC TNTNNTNNCT GACCTACTAA CCNATTNAGT TACNACAAGN CCNTTCNANT
631 CTCTATAATT NCTCGCANGT TNTCCCTCTT NNCANNTNCC CNTTNTNTNC CCTNTTCCCC ATCTNC

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SEQ. ID NO:20

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1 CCATTGGCCC TCTAGATGCA TGCTCGAGCG GCCGCCAGTG TGATGGATAT CTGCAGAATT CGCCCTTCCT
71 ATGTATTTTC TCTTACTGGG CTTTCCTGGT TCTCAAACTC TTCAGCTCTC TCTCTTTATG CTTTTTCTGG
141 TGATGTACAT CCTCACAGTT AGTGGTAATG TGGCTATCTT GATGTTGGTG AGCACCTCCC ATCAGTTGCA
211 TACCCCATG TACTTCTTTC TGAGCAACCT CTCTTCCTG GAGATTGGT ATACCACAGC AGCAGTGCCC
281 AAAGCACTGG CCATCCTACT GGAGAGAAGT CAGACCATAT CATTTACAAG CTGTCTTTTG CAGATGTACT
351 TTGTTTTCTC ATTAGGCTGC ACAGAGTACT TCCTCCTGGC AGCCATGGCT TATGACCGCT GTCTTGCCAT
421 CTGCTATCCT TTACACTACG GAGCCATCAT GAGTAGCCTG CTCTCAGCGC AACTGGCCCTT GGGCTTCTGG
491 GTGGNTGGGT TCGGGGGCAA TGCAGTGCCC ACAGGCCTTC AATCAAGTGG GCTGNTCCTT CTGGTGGCCC
561 CCGGTGCCAA TCAACCACTT TTTTTTGGG ACAATTGCAN CCCTGGAATT GGGC

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SEQ. ID NO:21

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1  GNNCTTANTT CAATCCCACC NANCCNTGCC GANGCATGCT CGNGCGGCCG CCAGTGTGAT GGATATCTGC
71 AGAATTCGCC CTTCTATGT ATTTACTCTT ACTGGGCTTT CCTGGNTCTC AAACCTCTCA GCTCTCTCTC
141 TTTATGCTTT TTCTGGTGAT GTACATCCTC ACAGTTAGTG GTAATGTGGC TATCTTGATG NTGGTGAGCA
211 CNTCCCATCA GNTGCATACC CCCATGTTNT TCTTTCTGAG CNACCTCTCC TTCCTGGAGA TTGGTATNC
281 CNCAAGCNGC ANNGCCCAA GCTTTGCNCA TCTTATTGCN CAGANGCNNN CCNNTACANN NACNCTCCTG
351 TTTNTCGCTN CCTTNCCTCT TNCTTCNCTC ANNTACTNCN TCTNCTNTAG TNTCTTTCTT CTCTNTCNCT
421 CNTNNCNCCT NTAATNTTCC NCCTNTTCTN NTTTCTNTT TCCCTNCTCT GTTTCACCCC TACCTCTTAT
491 CCTNCTNCT NACTTCANNC TCNGNCNNTN NNNCNCNNT AAATNTANGN NNANNTNNTN ATNTNCTCTT
561 CTCCNTTAT ATCGCTCTT CTCNCTNCTC CNNTTCTCTC TCCTCANNCA TATCNANTNT NTTCTACTCT
631 CGTNCNNTAT CTANNCTCCT NTTTCNGTCC TNCTTCTCCT NTCATTTCTA TATTNCTTCT CANACANTNT
701 TCGCATCGTN GCANCATCTC CTCCCATCTC CTGTNCNCTN TTCCN

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SEQ. ID NO:22

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1  GNNNTTAANT CATCCCCNC TCNATGCATG CTCGAGCGGC CGCCAGNGTG ATGGATATCT GCAGAATTCG
71 CCCTTGTTTC GGAGGCAGTA GATGAATGGG TTGATGGAAT CTGAGACAGT GCTCTAGAAT CTGTGTTTCA
141 TACAGGATGA GATATAAATG AAACAAATGC TAAATAATGA CACAAGGTAC CTTGCCGAGA GAGGAATCAT
211 CCACCTGGAA GGGTAGGCTG TTTGTGAATA ATGTAGGGTG GGAGAGAAGG CTTTACTAAG GAGATGGGCT
281 TAAAGAATGT GAACGATGTG CTCACAGAGG CCACAGAAGA GAAATTATAG CCAGGAGAAC AACCTGAAAG
351 ACAAAGGACA CGGTGGCATG AGCGCATGTA ACACAATGTA CTCAGGAAAT GGCTGGCATC CTGAGATATG
421 GAGTGGAATA CAGTACAGGG CTTTGTAATC TCAGCTTGA GTCAGATCAC AGAAAGCCTT GACAAGGAAC
491 TGAAAATGGG TTCTGAAGGC CAGAAGCCCA TTCAAGATTC CCAAAGGGAA AAACACAAAT CAGCTTGGTT
561 TCAGGACGTA ATTCTTGGA GTTGCTAGAA TTACATCAGA AAGGAGGTT ACNT

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SEQ. ID NO:23

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1  GNNNTNANTC ANNCANTGGG CCCTCTAGAT GCATGCTCGA GCGGCCGCCA GTGTGATGGA TATCTGCAGA
71 ATTCGCCCTT CCTATGTATT TCCTCTTACT GGGCTTTCTT GGTTCCTAAA CTCTTCAGCT CTCTCTCTTT
141 ATGCTTTTTT TGGTGATGTA CATCCCCACA GTTAGTGGTA ATGTGGCTAT CTTGATGTTG GTGAGCACCT
211 CCCATCAGTT GCATACCCCC ATGTACTTCT TTCTGAGCAA CCTCTCCTTC CTGGAGATTT GGTATACCAC
281 AGCAGCAGTG CCCAAAGCAC TGGCCATCCT ACTGGGGAGA AGTCAGACCA TATCATTTAC AAGCTGTCTT
351 TTGCAGATGT ACTTTGTTAT CTCATTAGGC TGCACAGAGT ACTTCCTCCT GGCAGCCATG GCTTATGACC
421 GCTGTCTTGC CATCTGCTAT CCTTTACACT ACGGAGCCAT CATGAGTAGC CTGCTCTCAG CGCAGTGGC
491 CTTGGGCTCC TGGGTGNGGG GGTTCTGGC CATTGCAAGT GCCCACAAGC CCTAATCAGT GGCCCTGTCC
561 NTCTGGGGGC CCCCAGGCCA TTNACCACTT TTTCTGGGA CAATTGCACC CCTGGAATTG G

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SEQ. ID NO:24

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1  TNNTTAANTC ATTCCNTTGN CCCTCNAGAT GCATGCTCGA GCGGCCGCCA GTGTGATGGA TATCTGCAGA
71 ATTCGCCCTT TCCTTGTTAC TGAGGGAGTA GATTAGGGGA TTGATGGAAT CTGAGACAGT GCTCTAGAAT
141 CTGTGTTTCA TACAGGATGA GATATAAATG AAACAAATGC TAAATAATGA CACAAGGTAC CTTGCCGAGA
211 GAGGAATCAT CCACCTGGAA GGGTAGGCTG TTTGTGAATA ATGTAGGGTG GGAGAGAAGG CTTTACTAAG
281 GAGATGGGCT TAAAGAATGT GAACGATGTG CTCACAGAGG CCACAGAAGA GAAATTATAG CCAGGAGAAC
351 AACCTGAAAG ACAAAGGACA CGGTGGCATA AGCGCATGTA ACACAATGTA CTCAGGAAAT GGCTGGCATC
421 CTGAGATATG GAGTGGAATA CAGTACAGGG CTTTGTAATC TCAGCTTGA GTCAGATCAC AGAAAGCCTT
491 GACAAGGAAC TGAAAATGGG TTCTGAAGGC CAGAAGCCAT TCAAGATTCC CAAAGGGAAA AACACANATC
561 ACTTGTTTTT AGGACGTATT CTTGGGCAGT TGCTAGAATT ACATCAGAAA GG

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SEQ. ID NO:25

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1  GNNNNTTANT CCATGCCCTT CTAGATGCAT GCTCGAGCGG CCGCCAGTGT GATGGATATC TGCAGAATTC
71 GCCCTTGTTT CGCAGCCTAT AAATGAAGGG GTTGATGGAA TCTGAGACAG TGCTCTAGAA TCTGTGTTTC
141 ATACAGGATG AGATATAAAT GAAACAAATG CTAATAATG ACACAAGGTA CTTGCCGAG AGAGGAATCA
211 TCCACCTGGA AGGGTAGGCT GTTTGTGAAT AATGTAGGGT GGGAGAGAGG GCTTTACTAA GGAGATGGGC
281 TTAAAGAAAT GAACGATGT GCTCACAGAG GCCACAGAAG AGAAATTATA GCCAGGAGAA CAACCTGAAA
351 GACAAAGGAC ACCGGTGGCA TAAGCACATG TAACACAATG TACTCAGGAA ATGGCTGGCA TCCTGAGGTA
421 TGGAGTGGAA TACAGTACCG GGGCTTTGTA AACTCAGCTT GGAGTCAGAT CCAGAAAGCC CTTGACAAGG
491 AACTGAAAAT TGGGTTCTTG AAGGCCAGAA GCCATTCAAG GATTCCCCAA AGGGGAAAA CACAAATCAA

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561 GCTTGTTTTT AGGGACCGTT AATTCTGGGG CCAGGTTGCT TGAATTACCT TCANGAAAGG GAGGTTTACA
631 CT

SEQ. ID NO:26

1 GNNCTTATTC ATCCCCCTCT AGATGCATGC TCGAGCGGCC GCCAGTGTGA TGGATATCTG CAGAATTTCG
71 CCTTTCTTTG TTCCTCAGAG TGATAGATTAG GGGGTTGATG GGGTTGATGG AATCTGAGAC AGTGCTCTAG
141 AATCTGTGTT TCATACAGGA TGAGATATAA ATGAAACAAA TGCTAAATAA TGACACAAGG TACCTTGCCG
211 AGAGAGGAAT CATCCACCTG GAAGGGTAGG CTGTTTGTGA ATAATGTAGG GTGGGAGAGA AGGCTTTACT
281 AAGGAGATGG GCTTAAAGAA TGTGAACGAT GTGCTCACAG AGGCCACAGA AGAGAAATTA TAGCCAGGAG
351 AACAACTGA AAGACAAAGG ACACGGTGGC ATAAGCGCAT GTAACACAAT GTACTCAGGA AATGGCTGNC
421 ATNCTNAGAT ATGGAGNGNG AATACCAGTA CANGGCTTTN TANACTCANC TTGGAGTNCA GAATCACANA
491 ANGCTTGCA AGGAACTGAA AATGGGTTCT GAAAGGCCAG AAGCCNTTNA AGATTCCCAA AGGGAAAAAA
561 CACAAATCAA GCTTTTTTNA AGNACNGTAA TTCNTGGNGC CAGTTGCTTA GAATTNCCAT CANAAANG

SEQ. ID NO:27

1 GGNNTAAGCC TTCCCCCTNC GATGCTGCTC GAGCGGCCGC CAGTGTGATG GATATCTGCA GAATTCGCCC
71 TTCCCATGTA TTTCTCTTA CTGGGCTTTC CTGGTTCTCA AACTCTTCAG CTCTCTCTCT TTATGCTTTT
141 TCTGGTGATG TACATCCTCA CAGTTAGNGG TAATGGGGCT ATCTTGATGN TGGTGAGCAC CNCCCATCAG
211 TTGCATACCC CCATGTACTT CTTTCTGAGC AACCNNNTCCN TCCTGGAGAN TTTGGNATAC CACACGCAAN
281 NAGNGNCCNA AGGCACTTGG NCNTNCTACA GNGGAGAAG GCTTGACCAT ANNATTTTAC CATGCCTNGC
351 CTTANGNCAN ACCCANNCTTN TNCCTNTTNT TCCNCTNNNN GGTNNNTCAN CCGCANNCTT NNATCNNNTG
421 NANCTTCATN GAATATGGNN TNGTNTNTC TTGAGAGCCT CNNGATCNA TTTTTTCCAN CNNCTAAAGN
491 GNGGCTTNTC TCTCTNNNAT CTAGCTTNNNT GGNCTCTCTT TTNNTNCTNA CCCGTGNTNT CCTATNTGNT
561 GTCTCTTCTT ACNNNCTGCN NTTATTNTAN ATCANNTCTN NCNTTGCTCT CNTNTACNAC ATNATCATNC
631 TCNCTCCCN CTNTCNCCT CTATNNCNTA CCATCNCCT CTTCTCATTC ANCTCTTNTT CATTGNTTGT
701 TCANTTANNC ACTCTCCNTC NCATCTTCTA TNCACANNT TTNTNTTTT NCTCTCTANT TCTNNTTCCA
771 NTGTNCACTC CNNTCTTNNC NNTTNCCTA NCG

SEQ. ID NO:28

1 GTNNNTNANN NCATTGCCCC TCTNGATGCA TGCTCGAGCG GCCGCCAGTG TGATGGATAT CTGCAGAATT
71 CGCCCTTCCT ATGTACTTCC TCTTACCGGG CTTTCCTGGT TCTCAAACCTC TTCAGCTCTC TCTCTTTATG
141 CTTTTTCTGG TGATGTACAT CCTCACGGTT AGTGGTAATG TGGCTATCTT GATGTTGGTG AGCACCTCCC
211 ATCAGTTGCA TACCCCATG TACTTCTTTC TGAGCAACCT CTCCTTCCTG GAGATTTGGT ATACCACAGC
281 AGCAGTGCCC AAAGCACTGG CCATCCTACT GGGGAGAAGT CAGACCATAT CATTTACAAG CTGTCTTTTG
351 CAGATGTACT TTGTTTTCTC ATTAGGCTGC ACAGAGTACT TCCTCCTGGC AGCCATGGCT TATGACCGCT
421 GTCTTGCCAT CTGCTATCCT TTACACTACG GAGCCATCAT GAGTAGCCTG CTCTCAGCGC AGCTGGCCCT
491 GGGCTTCTGG GTGGGTGGGT TTCGGGGCCA TTGCAAGTGC CCACAGCCCT TATCAAGTGG CCTGTCTTTC
561 TGNGGCCCCC GGGCCCATCA ACCACTTTTT TCTGGGGACA ATTGCACCCT GGAATGGCCC

SEQ. ID NO:29

1 GTNNNTNANN CCATNCCATT GGGCCCTCTA GATGCATGCT CGAGCGGCCG CCAGTGTGAT GGATATCTGC
71 AGAATTCGCC CTTTCATGGT TCCGGAAACA GTAAATTATG GGGTTCAGTC ATGGTAACAG GAGGAGGCTG
141 AGTGTATGGG CATGGATGGG GGCTGTGAAT GTGGCGGGAG CTCATGGATG TGCTCTTCTG AGTGCTTCAC
211 GTTTCTGAGT GAAATAAGAA GCAAGGTCAT CACCGAGAGG GAGGAGACAG GCTCGGGTGA GTTTAGTGGA
281 TATGAATCCA AGAGAGACCA TTCAACTTAG TTGTCTATTT TTTTTTCTC CAGTTATAGT CACTTGATG
351 AATGTAGATG TGGAGTACTT GATCATAAGA TCCATTTTAT GGCAGAAGAC ATTATTTTTC TGAGCCTTCT
421 GCTGTCAGTT TCTAAATAAG CAGGCCAGCC GGGCTGTGCA CCTAAATGTC TGTCTGGGAG GAGCAGGCTG
491 AGAAGTCTTG CAGTCTGCAG GACACCCGAG GAATCGTATT GTGGGAACCG TCCCCGAGAA CCACACGAGC
561 CGTGCTNCTC AGTNCTGACT GGAANAATGA AATTGNAAGC CAAGTNGTTC NNGGANCNNT

SEQ. ID NO:30

1 GNNNTNANN CCATTGCGCC CTCTAGATGC ATGCTCGAGC GGCCGCCAGT GTGATGGATA TCTGCAGAAT
71 TCGCCCTTCC TATGTATTTT TCTTCCTAAC GATTGGAATG CCTGGGATTA GGCAGATGAT TTTCTTTTTC
141 CCCCATACCC CTCTATTATT TAGGTGATTG AGTTTAAATC CCTTTATCTA CACCCTTCGG AACAAAGGCG
211 AATTCCAGCA CACTGGCGGC CGTTACTAGT GGATCCGAGC TCGGTACCAA GCTTGATGCA TAGCTTGAGT

281 ATTCTAACGC GTCACCTAAA TAGCTTGGCG TAATCATGGT CATAGCTGTT TCCTGTGTGA AATTGTTATC
 351 CGCTCACAAAT TCCACACAAC ATACGAGCCG GAAGCATAAA GTGTAAAGCC TGGGGTGCCT AATGAGTGAG
 421 CTAACCTACA TTAATTGCGT TCGGCTCACT GCCCGCTTTC CAGTCGGGAA ACCTGTCGTG CCAGCTGCAT
 491 TAATGAATCG GCCAACGCGC GGGGAGAGGC GGTTCGCGTA TTGGGCGCTC TTCCGCTTTC TCGCTCACTG
 561 ACTCGCTGGG CTTGCGTCGN TCGGCTGCGG CGAGCGGGAT CAGCTCACTC AAAAGG

SEQ. ID NO:31

1 GNNNNNNNNNT CANGCCATTG GGCCCTCTAG ATGCATGCTC GAGCGGCCGC CAGTGTGATG GATATCTGCA
 71 GAATTCGCCC TTCCTATGTA TTTCTCTTCA CTTTCTCCGA CATCACTCAC AGCCACCCCA CCCTCAGCCT
 141 CTCCCTCCTC CCATGTATTT TCTCTTCAAT CTCTCCTTCT TTGATATCCT GAACTTTCTG TAGCTCTTTA
 211 TTTTCTCTTC CAATCCCTTC ATATACACGT TTCGTAACAA GGGCGAATTC CAGCACACTG GCGGCCGTTA
 281 CTAGTGGATC CGAGCTCGGT ACCAAGCTTG ATGCATAGCT TGAGTATTCT AACGCGTCAC CTAAATAGCT
 351 TGGCGTAATC ATGGTCATAG CTGTTTCCTG TGTGAAATTG TTATCCGCTC ACAATTCCAC ACAACATACG
 421 AGCCGGAAGC ATAAAGTGTA AAGCCTGGGG TGCCTAATGA GTGAGCTAAC TCACATTAAT TCGGTGCGCT
 491 CACTGGCCGC TTTCCANGTC GGGAAACCTG TCGGCCAGCT GCATTAAATG AATCGGCCAA CGCNCCGGGA
 561 GAGGCGGTTT GCGTATTGGG CGCTNNTTCG TTCTTCGNTN ACTGATCGNT GG

SEQ. ID NO:32

1 GNNNNNNNNNT TCATNCCATT GGGCCCTCTA GATGCATGCT CGAGCGGCCG CCAGTGTGAT GGATATCTGC
 71 AGAATTCGCC CTTGTTGCTT AGAGTGTAAT TAAAGGGGTT AACATTGGCT TAGAGGTGAA GAGTAAATAC
 141 ATAGGAAGGG CGAATTCCAG CACACTGGCG GCCGTTACTA GTGGATCCGA GCTCGGTACC AAGCTTGATG
 211 CATAGCTTGA GTATTCTAAC GCGTCACCTA AATAGCTTGG CGTAATCATG GTCATAGCTG TTTCTGTGT
 281 GAAATTGTGA TCCGCTCACA ATTCCACACA ACATACGAGC CGGAAGCATA AAGTGTAAG CCTGGGGTGC
 351 CTAATGAGTG AGCTAACTCA CATTAAATTG GTTGCGCTCA CTGCCCGCTT TCCAGTCGGG AAACCTGTGC
 421 TGCCAGCTGC ATTAATGAAT CGGCCAACGC GCGGGGAGAG GCGGTTTGCG TATTGGGCGC TCTTCGCTT
 491 CTCTCGCTCAC TGACTCGCTG CGCTCGGTG NTCTGGCTGCG GCGAGCGGTA TCAAGCTCAC TCAAAGGCGG
 561 TAATACGGTT ATCCACAGAA TCAGGGGGAT ACGCANGAAA GAACATGTGA GCAAT

SEQ. ID NO:33

1 GNTNTNANTC ATGCCCCCNC CGATGCNTGC NCGAGCGGCC GCCAGTGTGA TGGATATCTG CAGAATTTCG
 71 CCTTGTTGCG GAGCGAATAT ATGAAGGGGT TAAGGGAAGA GAAAATACAT AGGAAGGGCG AATTCCAGCA
 141 CACTGGCGGC CGTTACTAGT GGATCCGAGC TCGGTACCAA GCTTGATGCA TAGCTTGAGT ATTCTAACGC
 211 GTCACCTAAA TAGCTTGGCG TAATCATGGT ATCATGCTGT TCCTGTGTGA AATTGTTATC CGCTCACAAT
 281 TCCACACAAC ATACGAGCCG GAAGCATAAA GTGTAAAGCC TGGGGTGCCT AATGAGTGAG CTAACCTACA
 351 TTAATTGCGT TCGGCTCACT GCCCGCTTTC CAGTCGGGAA ACCTGTCGTG CCAGCTGCAT TAATGAATCG
 421 GCCAACGCGC CGGGGAGAGG CGGTTTGCGT ATTGGGCGCT CTTCGCTTC CTCGCTCACT GACTCGCTTG
 491 CGCTCGGTCC GTTCGGCTGC GCGGAGCGGT ATCAANTCAC TCAAAAGGCG GGAATACGGG TTTNCACAGA
 561 AATCAGGGGG ATAACGCNGG AAAGAACATG TGAGCCANAN GGCAGCAAAA GGGCNAGGAA T

SEQ. ID NO:34

1 GNNNNNNNNNT CANNCCATTG GGCCCTCTAG ATGCATGCTC GAGCGGCCGC CAGTGTGATG GATATCTGCA
 71 GAATTCGCCC TTGTTCCGAA GGCTATAGAT GAAGGGGTTT TAGGTTTTTA GGAACACAGG CTAAGGGGGA
 141 AGAGAAAATA CATGGGAAGG GCGAATTCCA GCACACTGGC GGCCGTTACT AGTGGATCCG AGCTCGGTAC
 211 CAAGCTTGAT GCATAGCTTG AGTATTCTAA CGCGTCACCT AAATAGCTTG GCGTAATCAT GGTTCATAGCT
 281 GTTTCCTGTG TGAAATTGTT ATCCGCTCAC AATTCCACAC AACATACGAG CCGGAAGCAT AAAGTGTAAT
 351 GCCTGGGGTG CCTAATGAGT GAGCTAACTC ACATTAATTG CGTTGCGCTC ACTGCCCGCT TTCCAGTCGG
 421 GAAACCTGTC GTGCCAGCTG CATTAAATGA TCGGCCAACG CGCGGGGAGA GGCGGTTTGC GTATTGGGCG
 491 CTCTTCGCTC TCCTCGCTCA CTGACTCGCT GCGCTCGGTC GTCGGCTGCG GCGAGCGGTA TCAGCTCACT
 561 CAAAGGCGGT AATACGGGTA TCCACAGAAT CANGGGATAA CGCAGGAAAA GACA

SEQ. ID NO:35

1 GGNNTTNANT CATTGCCCGG CTNGATGCAT GCTCGAGCGG CCGCCAGTGT GATGGATATC TGCAGAATTC
 71 GCCCTTCCGA TGTATTTTCT TCTACGTAA GGTATTTTAA ATTGTTACTA ATGCATAAGG GCAACACATT
 141 CTGTAATGCT GACAAGATGA AAGAGCCAAA AGTAATTAAT GATGCTGTTA CCTCACAAAT ATGTATGTGT
 211 GGATGTATAT ATATCTATTC AATATATGTA ACTATACATA TGTCTGTTTC TAATTGAAAA CACCAGGTAA

281 TTATCATCTG TAGAAACCCCT AGTGTCTCAG ATAAGTTGGC TAGTTTTTTG TTTCACATAA AGGAACAAAC
 351 ATTTATAGAT TTATATGTAT ATTA AAAATG GTAAAAATTG GCTGGGTGCA GTGGTTCATG CCTATAATAC
 421 CAGCACTTTG GGAAGCCGAG GTGGGCGGAT TACTTGAGGT AAGGAGCCCA GCCTGACCAA CAAGGTGAAA
 491 CCCCATCCCT ACTAAAAATA CAAGAATTAG CCCGGGGATG GTGGTGCCCA CCTGTAATCC CAGCTACTTG
 561 GGAGACTGAA GCCAGGAAAA TCACTTGACC CAGGAAGCNG AGGTTGCAGG NGAG

SEQ. ID NO:36

1 NGNNNTTGAN TCAATTCNNN GNCGANGCAT GCTCGAGCGG CCGCCAGTGT GATGGATATC TGCAGAATTC
 71 GCCCTTCCTA TGTATTTCTT TCTAGCCAAC CTCCCACTCA TTGATCTGTC TCTGTCTTCA GTCATAGCCC
 141 CCAAGATGAT TACTGACTTT TTCAGCCAGC GCAAAGTCAT CTCTTTCAAG GGCTGCCTTG TTCAGATATT
 211 TCTCCTTCAC TTCTTTGGTG GGAGTGAGAT GGTGATCCTC ATAGCCATGG GCTTTGACAG ATATATAGCA
 281 ATATGCAAAAC CCCTACACTA CACTACAATT ATGTGTGGCA ACGCATGTGT CGGCATTATG GCTGTGCGAT
 351 GGGGAATTGG CTTTCTCCAT TCGGTGAGCC AGTTGGCCTT TGCCGTGCAC TTACCCCTTCT GTGGTCCCAA
 421 TGAGGTCGAT AGTTTTTATT GTGACCTTCC TAGGGTAACC AAACCTGCCT GTACAGATAC CTACAGGCTA
 491 GATATTATGG TCATTGCTAA CAGTGGTGTG CTCACTGTGT GGTCTTTTGT CTTCTAATCA TCTCATACAC
 561 TATCATCCTA ATGACCATCC AGCATTGCCC TTTAGATAAG TCGTNCAAAG G

SEQ. ID NO:37

1 GNNNTNANTC CNNNCCNCNN CTAGATGCAT GCTCGAGCGG CCGCCAGTGT GATGGATATC TGCAGAATTC
 71 GCCCTTCCCA TGTATTTGCT TCTCAGCAAC TTGTCTTCT CTGACCTCTG CTTCTCTTCC GTGACCATTC
 141 CCAAGTTGTT ACAGAACATG CAGAACCAGG ACCCATCCAT CCCCTATGCG GACTGCCTGA CCCAAATGTA
 211 CTTCTTCTG TTATTTGGAG ACCTGGAGAA CTTCTCTCTT GTGGCCATGG CCTATGACCG CTATGTGGCC
 281 ATCTGCTTCC CCCTGCACTA CACCGCCATC ATGAGCCCCA TGCTCTGTCT CGCCCTGGTG GCGCTGTCTT
 351 GGGTGCTGAC CACCTTCCAT GCCATGTTAC ACACCTTACT CATGGCCAGG TTGTGTTTTT GTGCAGACAA
 421 TGTGATCCCC CACTTTTTCT GNGATATGTC TGCTCTGCTG AAGCAGGCCT TCTCTGACAC TCGAGTTAAT
 491 GAATGGGTGA TATTTATCAT GGGAGGGCTC ATTCTTGTCA TCCCATTCTT ACTCATTCTT GGGTCTATG
 561 CAAGAATTGT CTCCTCATCC TCAAGGTCCC TTTNTAANG GTATCTGCAA GGCCCT

SEQ. ID NO:38

1 NGNNNNNTNA NTCNANGCCN NGNGCCCTCT AGATGCATGC TCGAGCGGCC GCCAGTGTGA TGGATATCTG
 71 CAGAATTTCG CTTTCCAATG TATTTACTTC TCAGCCAGCT CTCCCTTATG GACCTGATGT ACATCTCCAC
 141 CACCGTCCCC AAGATGGCGT ACAACTTCCT GTCCGGCCAG AAAGGCATCT CTTTCTGGG ATGTGGTGTG
 211 CAAAGCTTCT TCTTCTGAC CATGGCGTGT TCTGAAGGCT TACTCCTGAC CTCCATGGCC TACGACCGTT
 281 ATTTGGCCAT CTGCCACTCT CTCTATTATC CTATCCGCAT GAGTAAAATG ATGTGTGTGA AGATGATTGG
 351 AGGCTCTTGG AACTGGGGT CCATCAACTC CTTGGCACAC ACAGTCTTTG CCCTTCATAT TCCCTACTGC
 421 AGGTCTAGGG CTATTGACCA TTTCTTCTGC GATGTCCCAG CCATGTTGCT TCTTGCTGTA CAGATACTTG
 491 GGTCTATGAA TATATGGTTT TTGTAAGGAC AAAGCCTCTT TCTTCTTTN CTTTTCATTG GCATCACTTC
 561 TTCTGNNGGC CGAGTCCTAA TTGCTGGCTA TATAATGCAC TCAAAGGAGG GGAGG

SEQ. ID NO:39

1 TAGNNNNNTT ANNTCANNGC CNNTGNNNGC TCAGATGCAT GCTCGAGCGG CCGCCAGTGT GATGGATATC
 71 TGCAGAATTC GCCCTTCCAA TGTATTTTCT TCTCAGCAGG AGAGATATTT ATCCTCACTG CCATGTCCCTA
 141 TGACCGCTAT GTAGCCATCT GCTGTCCCCT GAACTACGAG GCTGCACAGA GTACTTCCTC CTGGCAGCCA
 211 TGGCTTATGA CCGCTGTCTT GCCATGTGCT ATCCTTTTACA CTACGGAGCC ATCATGAGTA GCCTGCTCTC
 281 AGCGCATGTC GCCCTGGGCT CCTGGGCTG TGCTTTCGTG GCCATTGCAG TGGCCACAGC CCTCATCAGT
 351 GGCCTGTCTT TCTGTGGCCC CCGTGCCATC AACCATTCT TCTGTGACAT TGCACCCCTGG ATTGCCCTGG
 421 CCTGCACCAA CACACAGGCA GTAGAGCTTG TGGCCTTTGT GATTGCTGNT GTGGTTATCC TGAGTTCATG
 491 CCTCATCACC CTTGTCTCCT ATGTGTACAT CATCAGCACC ATCCTTAGGA TCCCCTCTGC AGTGGCCGGA
 561 GCAAAGCCTT CTCCCGTGCT CCTCGCATCT NAACGNGGTG CTCATTTGGT ATGGG

SEQ. ID NO:40

1 CATGCTCGAG CGGNGGCCAG NGNGATGGAT ATCTGCAGAA TTCGCCCTTC CTATGTATTT GCTTCTCAGC
 71 AGGAGAGATA TTTATCCTCA CTGCCATGTC CTATGACCGC TATGTAGCCA TCTGCTGTCC CCTGAACCTAC

141 GAGGTGATTC ATGTGCCCCAT TAGAGCTTGA GAAGCACTGC TTGGAAGCCC CTTCTGCCAT CAATGAGGCT
211 GCACAGAGTA CTTCTCTCTG GCAGCCATGG CTTATGACCG CTGCCTTGCC ATCTGCTATC CTTTACACTA
281 CGGAGCCATC ATGAGTAGCC TGCTCTCAGC GCAGCTGGCC CTGGGCTCCT GGGTCTGTGG TTTTCGTGGCC
351 ATTGCAGTGC CCACAGCCCT CATCAGTGGC CTGTCTTCT GTGGCCCCCG TGCCATCAAC CACTTCTTCT
421 GTGACATTGC ACCCTGGATT GCCCTGGCCT GCACCAACAC ACAGGCAGTA GAAGCTTGNG GCCTTTGTGA
491 ATTGCTGNTG TGGGTATCCC GAGTTCATGC CTCATCACCC TTGNCTTCTA TGTGTACATC ATCAGGCACC
561 ATTCTCAGGA TCCCTTCTGC AAGNGG

SEQ. ID NO: 41

1 ATGGNNNNNN NNTTTNNNAA ANTTTNNCCC ANTTTGGGCG GNCCCCCCT TCTTTAAGGN AATGGGCCCA
71 TTGGGCCCTT CCCGGAAGGC CCGGGGGCNC CCGGCCCAA AGGTTTGGGT TGGGAAATGG GGGGAATTTA
141 AATTCCTTTG GGCCAAGGNA AAAATTTTCC NGCCCCCCT TTTTTCCTT TTTGGTTTT ANCCGGGGGA
211 ANGGGGGGGT TGATTAATTA ATCGGGAAGN TNGGGGGGAA NTTTTTTAAA AAAACCTTG GGGGAAGGTT
281 CCAACCCAAC AAGGTTGGTT TTCCANGGGA CCGTTGGGAC CAGGCTTTN GAATCAAGAA TCCCAAAGGG
351 CATTCTTTTG GATTAAGGAA NGGTGCCGGG ACCGGTGAAA GGGAAAAAAC TGGTGGACCC CATACCAAAA
421 TGAGAACCAC GGTGAGATGC CGAGGAGCAC GTGGAGAAAG GCTTTGCTTC CGGCCACTGG CAGAGGGGAT
491 CCTGAGGATG GTGCTTGATG ATGTACACAT AGGGAGACAA GGGTGATGAG GCATGAATC AGGATAACCA
561 CAACAGCNAT CACAAAGGCC ACAAGCTCT ACTGCCTGTG TGTTGGGTGC AGGCCAGGGC AATCCAGGGG
631 TGCAATGTCA CAAGAAAGAA AGTGGTTGAT GGCACGGNG GGCCACAGAA GGACAGGCCA CTTGATGAAG
701 GGCTTGTTGG CACTGCAATG GCCACGAAAC CACCAGACCC AGGAACCCAN GGCCAAGCTT GCGCCTGAAG
771 AGCAAGGCTA CTCATGAATG GCTTCCGTAG TNGTAAAGGA TAGCAAGATG GCAAAGGCAA GCCGGTCATN
841 AAGCCATGGC TTGCCNG

SEQ. ID NO: 42

1 GNNNTTANNN CATTGCGCCC TCTAGATGCA TGCTCGAGCG GCNCGCCAGT GTGATGGATA TCTGCAGAAT
71 TCGCCCTTGT TGCGCAAGGA GTAGATGAAC GGATTCAGGG CAAGGGAGTG CTGAGGAGAT AGACGGGTAT
141 AACTGGGCA CAAGTCCATG AGTAATCAAG GCCTGTTATT TAAAAAAGG CTTGAACAAT
211 ATAGAATCCC ATTACCCAGA GATAGACTGG ATGGTGAATT AAACCTTCTG GTGAATTTCT TTCCAGATAT
281 CTCTCTATGC ATATGTATAC ACAAGCAATT TTTGGAAGAA AAGATACTTT ATAAGGATAA GCCTGAAAC
351 TGCAACGAAT GCAATGTGGA GAATGAAGGC AAGATGTGGC GAAGAAGGGC ACCACAATCT GGTGGCTGAG
421 AGAGTGCAAC TGCTACTACA GCTAAAAGGA GAGCTGGAGA AGCTGGTGAG GACAGTAAGA GATGAATCTG
491 GTTTAAGACA CGCTGAGTCT CAAATGCCAT GGCTCCCCTA GGTTGCCTCT TCAGATGTAA ATCTTAAGCT
561 CAAAGCAGGT GGATGAGAAA TCACATTTCA TAGTCCCTGC ACAGACGGCT NTNTTGAGCT

SEQ. ID NO: 43

1 GNNNTTAAAN TCATTGCCCC GNNNGANGCA TGCTCGAGCG GCCGCCAGTG TGATGGATAT CTGCAGAATT
71 CGCCCTTCCC ATGTATTTGC TTCTCAGCAA CTTGTCCTTC TCTGACCTCT GCTTCTCTTC CGTGACCATT
141 CCAAGTTGT TACAGAACAT GCAGAACCAG GACCCATCCA TCCCCTATGC GGACTGCCTG ACCCAAATGT
211 ACTTCTTCTT GTTATTTGGA GACCTGGAGA GCTTCTCTCT TGTTGGCCATG GCCTATGACC GCTATGTGGC
281 CATCTGCTTC CCCCTGCACT ACACCGCCAT CATGAGCCCC ATGCTCTGTC TCGCCCTGGT GGCCTGTGCC
351 TGGGTGCTGA CCACCTTCCA TGCCATGTTA CACACTTTAC TCATGGCCAG GTTGTGTTTT TGTGCAGACA
421 ATGTGATCCC CCACTTTTTC TGTGATATGT CTGCTCTGCT GAAGCTGGCC TTCTCTGACA CTCGAGTTAA
491 TGAATGGGTG ATATTTATCA TGGGAGGGCT CATTCTTGCA TCCATTCTTA CTCATCCTTG GGTCTATGC
561 AAGAAATGCT CCTCATCCTC AAGGCCCTTC TNTAAGGGTA TCTGCAAG

SEQ. ID NO: 44

1 GNNNTNANT CNTGCCCTGN CCCNCNGCNC NNGCGCCGCG GCGGATGGAT ATCTGCAGAA TTCGCCCTTG
71 TTAATAAGAG TATAGATGAA CGGATTCAGG GCAAGGGAGT GCTGAGGAGA TAGACGGGTA TACACTGGGC
141 ACAAGTCCAT GAGTAATCAA GGCCTGTTAT TTAAGGAGGCT TGAACAATAT AGAATCCCAT
211 TACCCAGAGA TAGACTGGAT GGTGAATTAA ACTTTCTGGT GAATTTCTTT CCAGATATCT CTCTATGCAT
281 GTGTATACAC AAGCAATTTT TGGAAGAAAA GATACTTTAT AAGGATAAGC CTGAAACTG CAACGAATGC
351 AATGTGGAGA ATGAAGGCAA GATGTGGGCA AGAAGGGCAC CACAATCTGG TGGCTGAGAG AGTGCAACTG
421 TCACTACAGC TAAAAGGAGA GCTGGAGGAG CTGGTGAGGA CAGTAAGAGA TGAATCTGGN TTAAGACAGC
491 CTGAGTCTCA GATGCCATGG CTTCCCTAGG TTGCCTCTTN CAGATGTAAA TCTTAAGCTC AAAGCANGTG
561 GATGAGAAAT ACACATTTNA TAGTCACCTG CACAGACGGT TTTTGTAT

SEQ. ID NO:45

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1 CATGCCCGT CCCNCNAGNT NCNNGCNCCG CGGCCGCNAN GGATATCTGN ANAATTCGCC CTTCCATGT
71 ATTTACTTCT CCAACTTCTC CTTCCCATCT CTATCATTAG AACCCATTCA TATACACCCT ACGAAACAAG
141 GGCGAATTCC AGCACACTGG CGGCCGTTAC TAGTGGATCC GAGCTCGGTA CCAAGCTTGA TGCATAGCTT
211 GAGTATTCTA ACGCGTCACC TAAATAGCTT GGCCTAATCA TGGTCATAGC TGTTCCTGT GTGAAATTGT
281 TATCCGCTCA CAATTCACAC CAACATACGA GCCGGAAGCA TAAAGTGTA AGCCTGGGGT GCCTAATGAG
351 TGAGCTAAT CACATTAATT GCGTTGCGCT CACTGCCCGC TTTCCAGTCG GGAAACCTGT CGTGCCAGCT
421 GCATTAATGA ATCGGCCAAC GCGCGGGGAG AGGCGGTTTG CGTATTGGGC GCTCTCCGC TTCTCGCTCA
491 CTGACTCGCT GCGCTCGGTC GTTCGGCTGN GCGGAGCGGT ATCAGCTCAC TCAAAGGCGG NAATACGGTT
561 ATCCACAAGA ATCAGGGGGA TAACGCAAGA AAAGACATGT GA

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SEQ. ID NO:46

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1 GNNNTNATTN ATTGCATTGG GCCCTCTAGA TGCATGCTCG AGCGGCCGCC AGTGTGATGG ATATCTGCAG
71 AATTCGCCCT TAGTGAGTAG ATGAAAGGGT TCAGCATGGG GGTCAACCACA GTGTACATCA TAGCCATGAC
141 AGTGTCTTT AGAGTAGAAC TATTAGCTGA TGAGCATAAG TAGAGACCAA TAACGGTTCC ATAGAACAGT
211 GACACCACAG ATAGGTGGGA GCCACAAGTA GAGAAGGCC TGCAGACACC CTTAGAAGAA GGGACCTTGA
281 GGATGGAGGA GACAATTCTT GCATAGGACC CAAGGATGAG TAGGAATGGG ATGACAAGAA TGAGCCCTCC
351 CATGATAAAC ATCACCCTAT CATTAACTCG AGTGTGAGAG AAGGCCAGCT TCAGCAGAGC AGACATATCA
421 CAGAAAAGGT GGGGGATCAC ATTGTCTGCA CAAAAACACA ACCTGGCCAT GAGTAAAGTG TGTAACATGG
491 CATGGAAGGT GGTGAGCACC CAGGACAGCG CCACCAGGGC GAGACAGAGC ATGGGGCTCA TGAGGGCGGT
561 GTAGTGCAGG GGAAGCAGA TGGCCACATA GCGGTCATAG GCCATGGCCA CAAGGAGGAA

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SEQ. ID NO:47

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1 CNATGGGCC TCTAGATGCA TGCTCGAGCG GCCGCCAGTG TGATGGATAT CTGCAGAATT CGCCCTTCCA
71 ATGTATTTGC TTCTCAGCAA CTGTCTCTTC TCTGACCTCT GCTTCTCTTC CGTGACCATT CCCAAGTTGT
141 TACAGAACAT GCAGAACCAG GACCCATCCA TCCCTATGC GGACTGCCTG ACCCAAATGT ACTTCTTCTT
211 GTTATTTGGA GACCTGGAGA GCTTCTCTCT TGTGGCCATG GCCTATGACC GCTATGTGGC CATCTGCTTC
281 CCCCTGCACT ACACCGCCAT CATGAGCCCC ATGCTCTGTC TCGCCCTGGT GCGCTGTCC TGGGTGCTGA
351 CCACCTTCCA TGCCATGTTA CACACTTTAC TCATGGCCAG GTTGTGTTTT TGTGCAGACA ATGTGATCCC
421 CCACTTTTTT TGTGATTTGT CTGCTCTGCT GAAGCTGGCC TTCCCTGACA CTCGAGTTAA TGAATGGGTG
491 ATATTTATCA TGGGAGGGCT CATTCTTGTC ATCCCATTC TACTCAATCC TTGGGTCTAT GCAAGAAATT
561 GTCTTCTTCA TNCTCAANGG CCCTTCTTTC TAANGGTATC TTGCAAG

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SEQ. ID NO:48

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1 ANNNCCNTNG GAGCTCCAAA GCAGTGGTAA CAACGCAGAG TACGCCCCCT ATGTACTTAC TTTTGTAAAG
71 TCCAACCTCC ATCCTCCTTG GCCTTTTGAT TCAATTGATC ACTCCTTCCT CCTCAAACA CCTTGTTTAC
141 TCATCCTTTC TCAGTCTCCT TTGTGGATT CTTCTCATTT ATTTGACCTC TTGCTGGTGA ACCCTTTCAT
211 ATACACTCTC CGTAACAAAG AGGGCGTACT TCTGTCGTC TGAAGGNACT GATGGNACCC AGCTTTTGT
281 CCCTTTAGTG AGGNTAATT GCGCGCTTGG CGNAATCATG GNCATAGCTG NTTNCTGNGN GAAANTGNTA
351 TTTCGNTNAC AATTNCACAC AACATACNAG CCGGGAGCAT AAAGGGNNAA GNCCTGGGGN GCCTAATGAG
421 GGAGCTTACT CACAATAATT GGGGTGNGCC CACTGGCCCC TTTTCAGGCG GGAAAAACCTN GCGGGGCCAG
491 CTGGAATAAA TGAATCGGGC CACGCGCCGG GGAGGAGGGC GGGTTNNGGA ATTGGGCGCT TTTTCCNTTT
561 CTNGGTAAAT GGACTIONGTT GGCNNNGTCC GTTCGGTTGG GGGGANCNGN NNT

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SEQ. ID NO:49

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1 AACGCAGAGT ACCGCCCACT ACGTAATCTG TACATGAAAG GGTTTAAAAG AGACTGGGAA GAGAGGAATT
71 GGCAAGATCA AGCAGAGGCA ACTCCTTCTA GTCCTTCTAG TACCGCAAGG GGCAGATAAA TGGAAATGGT
141 AACACCTAGA GGAAAGTATA CTTGCCAAAA GCAAATNCAT AGGGGGGAGT ACATTATCGG GTTGAAAAAA
211 GTATTCCATG CAGATAAAAA CCAAAAAGCAA ATACATCGGG GCGTACTTTC TGTCTCTTT GAGCGTACTG
281 ATGGTACCCA GCTTTTGNCT CTTTAGTGAG GGTAAATTGC GCGCTTGGCG TAATCATGGT CATAGCTGGT
351 TTCTGTGTGA AATTGTTATC CCGCTCACAA TTCACACAAC ATACGAGCCC GGGAGCATAA AGTGTAAGC
421 CTGGGGTGCC TAATGAGTGG AGCTTACTTA CATTAAATTG CGTTGCGCTC ACTGGCCGCT TTTCCAAGTC
491 GGGAAACCTG TCGTGNCAGC TTCANTAATG AATCGGCCAA CGCCGCGGGG AGAGGCGGGT TCGGTATTGG
561 GCGCTCTTCC GCTTCTTNGT TNACTGACTT CGG

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SEQ. ID NO:50

1 GNNNTTTAAC NCCGGNGCTN CNAGCAGTGG AACACGCAG AGTACGCCCC CGATGTACTT TCTTTTTCAG
71 TCTCAAGTCT TCCTCTTCTC CAAAGATTTT GTCTTTTCTA CTACCTGAGC TACCAAATCC CTTGTCATCA
141 ATTTCAATAA CTGTATTCTC TTCATCATT CAACTTCAAA CGTGTCATCT CAGAACAAGC TTCATGTTAC
211 TTCCAATTTT ATCCTTCTTG TTTGCTGATT CCAAGAATTC CAGTCCCATC TAGGCCCCGCA ATGCATTGTT
281 CCTGCCACCC TTTTCATATC CTCAATTCCC TTGTATCATC ACTTTCCTTT TATATAGCAC AGATTCCATG
351 ATTCATAACA ATAATTATGT TTTTTTTTGC ATGTGCTCTT AATTTCTTTT CTTGCTCCTA TTATCTTCTA
421 TCATACTTTT CTGGAAACAC TAATTCCTGGT GAAATATACT CTTTGTGGAC TTTGCACTTA TGCTCAGTCA
491 GCTGAAGATG ATGGCTAGAC AAATACTCAC AATCATGCTG ACTGGCCCAA TTTATAGTCA TGACCACCGA
561 TTACAAACCC CTTCAATTAT TCTCCGCAAC AGGGGCGTCT TCTGCGCTTG AGCGTCCGGT GGGG

SEQ. ID NO:51

1 GCAGTGGTAA CAACGCAGAG TACGCCCCGT AC GGAGGCTG TAAATAAAGG GGTGAGGAA GTAAAGTACT
71 TCACAGTACT GGAGCACACA GCATGTGAAT TTCAGCCAAA GGACAAATGC CTCCAAAAAA AGTTAATTCA
141 CAGTGCAGCA GGGCGAGGCA CTTGTCTTAT TCGCTGGTTC TCACATTGAC CCTGAAAGGA CTTTTTTTTG
211 TTAATCCCAT TTTACAGAT GGGAAAGGGA CTCTGTATGG TTGTCACCTT TATCCAAAGT CTCATAGCCA
281 GTAAGAAGCT GCCCTCAAAG TCCCTACCCT GTCTTCCATT CGACTATTCT GAGGTTTCTA CCCAGAAACC
351 CCATACCTCT GCCTTATATT TTAATGAAAA GTATGTCTCC AGGTTTATGT GGAGAATAAC CAAGACCTCA
421 GAAACATTTA GTGAAAAACA GAGCTAGAAG GAATCTGTTT TTTTGCAGT TCAGAGAAAC TGACTTGGAT
491 AAGACATCAA AGTTGTCTTG TGCAGCAAAT TCTCTCCGG CACATAGTAG GCACTCTGAT AAATTCAAAA
561 AGGCTTCTAA GAAGAGGCAG AAGN

SEQ. ID NO:52

1 GTGAANCCAN NNTAANNCCN ATTGGAGCTC CAAGCAGTGG TAACAACGCA GAGTACGCCC CCGATGTAGT
71 TTCTTCTTTC CTTCCTTCCC TCCTTCCTTC CTCTTTCTCT TTCTCTCTCT CTCCCTCTCC CTCTCCCTCT
141 CCCTCTCTCT CTCCTTTTTC TTCTCCTTCC TCCTCCTCCC CCCAATCCGT TCATGACTTC TTCTTCTTCC
211 TCTTCTCTCT CTTCCTTTCT TTCTTCTTTT TCTCTAAGCA GGATCCTGGG CTGTTCAAAC CAGAGAGCTG
281 TAAGTCTTTT CTTTCCCCAT TACTGTTAGA TCCGTTGAAT CGGCTCCAGA AACCAAACAA GTTAACCTT
351 GCATTTACAC GTTTCGTAAC GGGCGTACTT CTGTCGTCTT GAGCGTACTG ATGGTACCCA GCTTTTGTTC
421 CCTTTAGTGA GGGTTAATTG CGCGCTTGGC GTAATCATGG TCATAGCTGT TTCCTGTGGG AAATTGTTAT
491 CCGCTCACAA TTCCACACAA CATACGAGCC GGGAGCATAA AAGTGTAAG CCTGGGGTGC CTNATGAGTG
561 AGCTAACTCA CATTAATTGC GTTGCCTTA CTGNCCGTTT TCAGTCNGGA AAN

SEQ. ID NO:53

1 TNANNNNNT TAANNCCCAT TGGAGCTCCA AAGCAGTGGT AACACGCAG AGTACGCCCC CGATGTACTT
71 GCTTCTTCTT CTTTGGAGTG GCTGAATGCT TCCTCCTGGC TACCATGGCA TATGACCGCT ATGTGGCCAT
141 CTGCAGTCCC TTGCACTACC CAGTCATCAT GAACCAAAGG ACTCGTGCCA AACTGGCTGC TGCTCCTGG
211 TTCCAGGCT TTCTGTAGC TACTGTGCAG ACCACATGGC TCTTCAGTTT TCCATTCTGT GGCACCAACA
281 AGGTGAACCA CTTCTTCTGT GACAGCCCAC CTGTGCTGAG GCTGGTCTGT GCAGACACAG CACTGTTTGA
351 GATCTACGCC ATCGTCGGAA CCATTCTGGT GGTCATGATC CCCTGCTTGC TGATCTTGTG TTCCTATACT
421 CGCATTGCTG CTGCCATCCT CAAGATCCCA TCAGCTAAAG GGAAGAATAA AGCCTTTTCT ACATGTTTCT
491 CACACCTCCT TGGTGGCTCT CTTTCTTATA TATCATTAAAG CCTCACCTAC TTCCGGCCTA AATCAAATAA
561 TTCACCTGAG GGCACGAAGC TGCTATCATT GCCTACACTG NTATGACTCC A

SEQ. ID NO:54

1 GTTNTTCCAT GGAATCCCAA GCAGTGGTAA CAACGCAGAG TACGCCCCCT ATGTACTTAC TTCTTGCTGG
71 CTTATCATTT ATAGATATCA TTTATTCTTC ATCCATTTCC CACAGATCGA TTTTCACTT GTTCTTTGGG
141 AATAATTCCA TATCCTTCCC ATCTTGCTTG GCCAGCTCT TTACAGAGCG CTTTTTGGT GGGTCAGAGG
211 TCTTCTTCT GTTGGTGAT GCCTATGACC TTGCACTTCT TGGTTATCAT GAGACAATGG GTGTGTGTTT
281 TGCTGCTGGT AGTGTCTGG GTTGGAGGAT TTCTGCACTC AGTATTTCAA CTTAGTGTTA TTTATGGGCT
351 CCCATTCTGT GACCTCAATG TCATTGATCA TTTTTTCTGT GATATGCACC CTTTATTGAA ACTGGTCTGT
421 ACCGATACCC ATGTTATTGG CCTCTTAGTG GTGGCAATGG AGGACTAGGT TGCATATTG GGNTTCTGCT
491 CTTACTCATC TCTTATGGNN CATCTGCACT CTCTAAAGAA CCTTAGTCAG AAAGGGAGGT GAAAAGCCCT
561 CTAACCTGC AGTTCCACAT AACTGGGGGG TGGTTTCTTC TTTGTN

SEQ. ID NO:55

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1  TTANNCCNNT  TNAATNCCNT  TGGAGCTCCA  AAGCAGTGGT  AACAAACGCAG  AGTACGCCCC  CAATGTACTT
71  GCTTCTTCTT  TTTTGGGGCT  GCTGAGTGCT  GCCTCCTGGC  CACCATGGCA  TATGACCGCT  ACGTGGCCAT
141 CTGTGACCCC  TTGCACTACC  CAGTCATCAT  GGGCCACATA  TCCTGTGCCC  AGCTGGCAAG  CTGCCTCTTG
211 GTTCTCAGGG  TTTTCAGTGG  CCACTGTGCA  AACCACATGG  ATTTTCAGTT  TCCCTTTTGT  TGGCCCCAAC
281 AGGGTGAACC  ACTTNTTNTG  TGACAGCCCT  CCTGTTATTG  NACTGGTCTG  TGCTGACACC  TCTGTGTTTT
351 GAACTGGAGG  CTCTTGACAG  CCACTGCCTA  ATTCATTCTC  TTTCTTTTCT  TGCTGATCCT  GGGATCCTAT
421 TTCGCATTCT  CTTCACTATC  TTTAAGGATG  CCGTCAGCTG  AGGGGAAACA  TNAGCATTTCT  NCACCTGTTC
491 CGCCACCTC  TTGGGTGGCT  CTCTCTTCTA  TAGCACTGGC  AATCCTTAAC  GTA'TTTTCCG  ACCCCAATTC
561 AAGTGCCTTT  TTNTGAGAAG  CAAAGAAACT  GGTGTGCTACT  TTTT'TTTCAC  AAGGGGNGAC  TTCCAATGTT

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SEQ. ID NO:56

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1  GNGNTTTNNN  CCATGGAGCT  CCAAAGCAGT  GGTAACAACG  CAGAGTACGC  CCCCCATGTA  CTTTCTTCTT
71  CTTTGGAGTG  GCTGAATGCT  TCCTCCTGGC  TACCATGGCA  TATGACCGCT  ATGTGGCCAT  CTGCAGTCCC
141 TTGCACTACC  CAGTCATCAT  GAACCAAAGG  ACTCGTGCCA  AACTGGCTGC  TACCTCCTGG  TTCCAGGCT
211 TTCCTGTAGC  TACTGTGCAG  ACCACATGGC  TCTTCAGTTT  TCCATTCTGT  GGCACCAACA  AGGTGAACCA
281 CTTCTTCTGT  GACAGCCAC  CTGTGCTGAG  GCTGGTCTGT  GCAGACACAG  CACTCTTTGA  GATCTACGCC
351 ATCGTCGGAA  CCATTCTGGT  GGTCAATGAT  CCCTGCTTGC  TGATCTTGTG  TTCTTACT  CACATTGCTG
421 CTGCCATCCT  CAAGGTCCCA  TCAGCTAAAG  GGAAGAATAA  AGCCTTTTCT  ACATGTTCTT  CACACCTCCT
491 TGNTGTCTCT  CTTTTCTATA  TATCATTAAG  CCTCACCTAC  TTCCGGCCTA  AATCAAATAA  TTCACCTGAG
561 GGCAAGAAGC  TGCTATCATT  GNCCTACACT  GTTATGACTC  CATGTTGAAC  CCCATAATTT  ATTCATTGAG
631 C

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SEQ. ID NO:57

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1  TTATNNCCAT  TGGAGCTCCA  AAGCAGTGGT  AACAAACGCA  GAGTACGCCC  CCCATGTATT  TTCTTTTCTT
71  TGGGGNAGCT  GNATGCTTCC  TNCTGGCTAC  CATGGNATAT  GACCGGCTAT  GNGNCATCT  GCAGTCCCTT
141 GNNCTCCCAG  TCATTATGAA  CCAAAGGACA  CGGGCCAAAC  TGGCTGGTGN  TTCCTGGGTC  CCAAGCTTTC
211 CTGNAGCTAC  TGNGCAAGAC  CACAATGGCT  CTTNAGNTTT  CCATTCTGNG  GCACCAACAA  GGTGAACCAC
281 TTNTTTCTGN  GACAGCCGGC  TGTGCTGAAA  GCTGGTCTGN  TGCAAGACAC  AGCACTGTTT  GAGATCTACG
351 CCATCGTCGG  AACCATTCTG  GTGGTCAATG  AACCCTTGCT  TGCTGATCTT  GNGTTCCTAT  ACTCGNATTG
421 GTGCTGCTAT  CCCTCAAGAA  CCCATCAAGC  TAAANGGGAA  GCAATAAAGN  CCTTTCTCTA  CGTGCTCCTT
491 AACACCTCCC  TTGGTGGCCT  CTCTTTTCTA  ATATAATCNT  CTAAGCCTCA  ACCTACTTCT  TGGGCCTNAA
561 NTCAAATAAA  TTCTTCTGGA  GAGGCAAGAA  GGTGGTATTC  ATTTATNCTA  CACTGGTNGN  GACTCCATGN
631 TGGAAC

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SEQ. ID NO:58

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1  GTNATNCCNT  TTAATNCCNT  TGGAGCTCCA  AGCAGTGGTA  ACAACGCAGA  GTACGCCCCT  TCCTCAGACA
71  GTATATGAAT  GGGTTAAAAA  TGGGCCAGAG  CAGATGCAGG  AAGATCAAAT  AGGAGGCTAC  TGCAGTAGAG
141 TCAAATCTAG  GGCTGATGGT  TTCTTGGGAT  GCATAGTAAT  AGGTAGATAG  AGAAAGTCTT  TAGGAGGTAG
211 AATGGACAGG  ACTTCACAAT  GCATTAAATG  TAGGGAGAAA  AAAAATGATT  CCTGGGTTTC  TAGCTTGAGC
281 TAGTAGGGAT  AGTGGTAGAA  TTTACTGATA  TGGAAAACCTG  GAGGAAAAAG  AGTTTGAAG  AGAAAGATGG
351 CAAGTTAAAT  ACCTGTGGGA  AATATAATCA  CAGACACTAA  ATAGGCAGCT  GTGTGGGTGG  CAAAGGAGAG
421 CCATGGGCTA  GGAACATACA  GTGGGATTCC  CTGGCAGATG  ATTGGTTACT  GAAGTCAGAG  TGTATGAGAC
491 AGCCTAAGGA  GAGAATNCAC  ACAGGAGAAG  AAAGAATAA  ACATTCACTG  GCTGGCCAGA  GGATGAGAAA
561 CCAAGAGAT  TGGACTGTTT  AGGAGCAACA  GTGTTGNGAA  AAGGGAGAAA  NGGTTGAAAT  T

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SEQ. ID NO:59

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1  GGNTTTANNC  NCTGGAGCTC  CAAAGCAGNG  GTAACAACGC  AGAGTACGCC  CATTGCGTAG  CGTGACATA
71  AAGGGGTTGG  AGCTGAAGGA  GGAGATAAAG  AAGAAGACAG  CCAGAACCTT  GTCTCTGTG  GGAGATCGCA
141 GGGATCTTGG  GCCGTAGATA  GGTATAAGCA  AAGGGTGCAT  AGTAGAAAGT  CACTACAGTG  AGGTGGGTGC
211 TGCAGGTCGA  ATAGGCCTTC  TTCTCCCTT  CTGCAGAGTG  CATGTGGTAG  ACAGCAAGGA  GAATCCGGCC
281 ATAGGAACAT  GCAATACAAA  TGAAGGGAAA  CACAAGAAAA  ATGGTGGTGC  TCAAAAACAC  CTGCACTCA
351 TAGACCCAGG  TATCCGTGCA  GGCTAGGGTC  AACATAGCTG  GAACATCACA  GAAAAAATGA  TTGATGGCTC
421 TGGACTTGCA  ATATGGGATA  CGGAGTGCAT  ATACCGTGTG  AGCACAAGAG  TTGATGGAGC  CTATCATCCA

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491 AGATCCTGTT ATCATCAGTG CACACACTCT TTTTCTCATA CGGATGAGAT AGTGGAGAGG AAAGCAAATA
561 GCCACATAAC GATCATAGGC CATTGATGTC AGGAGCAGCG CTTCTGCACC TGCTAAAGTC AGGAAGAAGA
631 T

SEQ. ID NO: 60

1 TGTTANTCCN NTTNCTNCC ATTGGAGCTC CCAAGCAGTG GTAACAACGC AGAGTACGCC CTCCTTGTTT
71 CTGAGAGTGT AGATGAAGGG GTTATAGGAG ATAAAGATCA GGGCAATATG TAGGACAAGG ACACAGACAC
141 TGACAACAAA GTTGATTATC TCATTGACAG TGGTGTCTGT GCAGGCCAGC TTCAGCAGGG GTCTCACATC
211 ACAGAAGAAG TGGGAGATGA CAAAGTCATC ACAAAGGGC AGGCCAAACA TAGATGTTAC TTGGACAATA
281 GCCATGCCCA GGCCAATCCT CAGTGACCCA GATCCCAGTC AGACACAAGC CCTGTTACCT ATGAATACCG
351 TAAGGGGTTG CAGAAGACCA CATAGCAATC ATATCCCATG GCTATGAGAA GAAAGCAGTT GTTGATGCCA
421 AAAGTCACAT AGAAGAGCTG AGTGACACAG CCTTGCATGA CAATAAGCTA GTGAGGATTC AAGAGGCGAG
491 AAAGCATATG GGGAGTAATG GCCACCATGT AGCAGGTCTC AGAGATAGAC AGCAATGCTT AGGAAAAAGT
561 ACATGGGCGG TACTTCTGTC GTCTTGAGCG TACTGATGGT ACCCAGCTTT TGTTCCTTT

SEQ. ID NO: 61

1 GTNANNCCNN TGTAGTCCN AAGCNGAGCT AACAAACNNAG AGAACAACGC AGAGTACGCC CCCGATGTAC
71 TTGTTCCCTAC TCTTTGCTGG ATTTGAAAAC TTCTCCTGT CCGTGATGGC CTATGACCGG TTTGTGGCCA
141 TCTGTCACCC CCTGCACTAC ATGGTCATTA TGAACCCTCA CCTCTGTGGA CTGCTGGTTC TAGCATCCTG
211 GACCATGAGT GCTCTGTATT CCTTGCTACA AATCTTAATG GTAGTACGGC TGTCTTCTG CACAGCCTTA
281 GAAATCCCC ACTTTTTCTG TGAACCTAAT CAGGTCATCC AACTTGCTTG TTCTGATAGC TTTCTTAATC
351 ACATGGTGAT ATATTTTACA GTTGCGCTGC TGGGTGGAGG TCCCTCACT GGGATCCTTT ACTCTTACTC
421 TAAGATAATT TCTTCCATAC ATGCAATCTC ATCAGCTCAG GGGAAGTACA AGGCATTTTC ACCTGTGCAT
491 CTCACCTCTC AGTTGTCTCC TTATTTTATG GTGCAATCCT AGGGGTGTAC CTTAGTCTGC TGCCACCCGC
561 AACTCACACT CAAGTGCAAC AGCCTCAGTG ATGTACACTG GGGCACCCCC AT

SEQ. ID NO: 62

1 GNNNNNNNAT TTNATGCCNT TNTTGATTCC CNTTNNNNNN NCAAGCAGNG GTAACAACGC AGAGTACGCC
71 CCTATGTAT TTCTTCCTAA GATCCAAATA TTAAATATA AGACAGTCAT CCCACCACTA ACTAAAGTAG
141 TGTTTCCAC ACTTCTCTAT TAAGAAGCAT GTGAGATACT TGTTACAAAC ATAACATCCT GGTCCACCC
211 CAAAGCCACT CAATCAAATA CTCCAGGGAA GGGATCTAGG AATTCGTAGG TTTAACGAGT GCCCCAAAT
281 GATTATTACC TGTTGGAGAA TCTAGGCAAC AATGAATTAA GGAAAGCTCT CTACCATTTC GTACTGGTAC
351 CAGGTTTGAG GATCACAGGG AAGAGGGTAA GCATATCAGA CTAGCAGAGC TGCCAGAACT CGGGCTTTCA
421 AAAGAGAGGT GCCACCCTCT CCCATGTCCA TGTAAGTAGC AAACAACCCT CTCATGTACA CTCTGAGGAA
491 CAAGGGGGCG TACTTCTGTC GTCTTGAGCG TACTGATGGT ACCCAGCTTT TGTCCCTTTA GTGAGGGTTA
561 ATTGCGCGCT TGGCGTAATC ATGGTCATAG CTGTTTCCTG TGTGAAATTG TTATCCGCTC ACAATTCT

SEQ. ID NO: 63

1 TGTAGCTCCA AAGCAGTGGT AACAAACGAG AGTACGCCCT CTTGGTTACG TAAGGGAATA GATGATGGGG
71 TTCAGCATGG GGGTGACTAC AGTGATACAT ACAGTGGCCA CACGGTCCCA CTCTGCTCGC GTCGGGACGT
141 GGCCTGGAAG TAGACTGCAA TGACTGTCTT ATAGAAAGAG GCTCACCACA NCCAGGTGGG AGCCACAGGT
211 GGGNCACAAG TCCCGGAGCC TCCAGAGGC TTGAGGGCAG CTGGAGCACG GGNAAGCTTG NTATGGNCCC
281 ACAAGGAGGC GAGGATGAGC AGNAAGGGAG TGACCACCAC TTGCNCGGCC CTNGGTGAAG ATGAGCAGCT
351 TGGATGTGGT GGNTGTCAGA GCACGAGAGC CTTTAAGAGA GGCTTGGTGG GTACAGAAG AAGTGGGNGC
421 ACTTTGTGGG AAAGCACAGA AAGGACAAGC GAGCCATGAG CAGGATATAC AGGAGGGAGT TGTCCGTGGG
491 ACACCAGCCA TGCCATTCCA ACCAGGGCTG CGCACATNGC CGGGGACATT CTCGTGGGAT AAGGGAAGGG
561 GTGCCGGATN GGCACGTATC AGTCATAGGC CTTGGNCGCC AGAAGACAGC TTTNAATTTA CCCCAGG

SEQ. ID NO: 64

1 GTTANNCCNT NTANCTNCAA NNGAGGTAAC AACGCAGAGT ACGCCCCCA TGTATTTGCT TCTTGTCCTAA
71 CCTGTCTTT GTAGAGATCT GCTACACCAC CGTTGTGGTG CCCTTGATGC TTTCCAACAT TTTTGGGGCC
141 CAGAAGCCCA TTCCATTGGC TGGATGTGGG GCCCAAATGT TCCTCTTTCT CACACTTGGT GGTGCTGACT
211 GTTTCCTCTT GGCGATCGTG GCCTATGACC GCTATGTGGC CATCTGCCAC CCTTTGCACT ACCCTCATC
281 ATGACCTGCA GTCTGTGCGT GCAGATGCTG GCGGGCGCTG TGGGCCTGGC CCTCTTCTC TCCCTGCAGC
351 TCACCGCCTT AATCTTCACC TTGCCCTTCT GCGGCTACCG CCAGGAAATT AACCCTTCC TCTGCGATGT

421 ACCTCCGTCC TGC GCCTGGC CTGCGCTGCA TCCGTGTTCA CCAGGCTGCC TCTATGTCGT GAGCATCCTC
 491 GTGCTGACCG TCCCCTTCTT GCTCATCTGC GTCTCCTACG TGTTTCATCAC CTGTGCCATC CTGAGCATCC
 561 GTTCTGCTGA GGGCCGGCAC CAGGCCTTTT CAACTGCTCT TCCGG

SEQ. ID NO: 65

1 TGTAGCTCCN AAGNNGAGNT ANCAACGCAG AGTACGCCCC CGGAATCTAT AGATGAAAGG GTTTGGNGAG
 71 TCAGAAAGAG GAAGTACATG GGAGTCATAA CAGTGTAGGA CAATGATGGC AGCTTCTTGC CCTCAGGTGA
 141 ATTATTTGAT TTAGGCCGGA AGTAGGTGAG GCTTAATGAT ATATAGAAAA GAGAGACAAC AAGGAGGTGT
 211 GAGGAACATG TAGAAAAGGC TTTATTCTTC CCTTTAGCTG ATGGGATCTT GAGGATGGCA GCAGCAATGT
 281 GAGTATAGGA ACACAAGATC AGCAAGCGGG GGATCATGAC CACCAGAATG GTTCCGACGA TGGCGTAGAT
 351 CTCAAAGAGT GCTGTGTCTG CACAGACCAG CCTCAGCACA GGTGGGCTGT CACAGAAGAA GTGGTTCACC
 421 TTGTTGGTGC CACAGAATGG AAAACTGAAG AGCCATGTGG TCTGCACAGT AGCTACAGGA AAGCCTGGGA
 491 ACCAGGAGGT AGCAGCCAGT TTGGCACGAG TCCTTTGGTT CATGATGACT GGGTAAGTGC AAGGGACTGC
 561 AGATGGCCAC ATAGCCGGTC ATATGCCATT GGTAGCCAG GANGAAGCT

SEQ. ID NO: 66

1 GTTATNCCTT GTTGCTCCCN AGCAGAGGTA ACAACGCAGA GTACGCCCCCT ATTTCTCAGA TATANGATGA
 71 AGGGGTTTCAG AAAAAGAATG AGCAAAGAAA ATCTGGGCCA GGCGGGCATC AAAAGAAATA GTCTTGTGCT
 141 CAACCAGAAA GTCTGCAATC ATTTTAGGGG TAGCAGAAGA GGCAACACAT ACGTCTATAA ATGACAGGTT
 211 GGCAAGAAGC AAATACATTG GGGGCGTACT TCTGTCTGCT TGAGCGTACT GATGGTACCC AGCTTTTGT
 281 CCCTTTAGTG AGGGTTAATT GCGCGCTTGG CGTAATCATG GTCATAGCTG TTTCTGTGT GAAATTGTGA
 351 TCCGCTCACA ATTCCACACA ACATACGAGC CGGGAGCATA AAGTGTAAG CCTGGGGTGC CTAATGAGTG
 421 AGCTAACTCA CATTAATTGC GTTGCGCTCA CTGCCCCGCT TCAGTCGGGA AACCTGTCTG GCCAGCTGCA
 491 TTAATGAATC GGCCAACGCG CCGGGGAGAG GCGGTTTTCG TATTGGGCGC TCTCCGCTT CTCGCTCACT
 561 GACTCGCTTG CGCTCGGTG TTCGGCTTGC GCGAGCGGT ATCAAGCTCA CTCAAAT

SEQ. ID NO: 67

1 GGGTTTTACN CTGTGCNCCC CCAGCAGNGG TAACAACGCA GAGTACGCCC TTGTTGCGAA GAAATAAATG
 71 AATGGGTTTA AAATAGACGT GAAGATGGTG TAGAATACAG CAAGGACTTT GTCAACTGAG TAACTGCTGA
 141 AGGGCCACAC ATAGATGAAA ATACACGATC CAAAGAATAA AGTGACCACA GTGATGTGAG CAGTCAATGT
 211 GGAGTGGGGC TTCACCATGC TTACAGAGGA GCGATTCCTA ACTGTAATAA GTATTACAGT GTAGGANACA
 281 ACCAANAGGA GAAAGGAAC CAGAGAAAGA AAGCCACCAT CTGCAACTAT TAGTAGGCTG ACAACATAAG
 351 TGTCTATGCA GGCTAACTTN GTNGCTAGAG GAAAGTCACA GAAAAAACT ATCTACCTTA TTAGGACCAC
 421 ANAATGGCAG ATTAACCGTG AATGCCAACT GGCTGGTGGT ATGGATGAAG CCCACAAACC AGGAAATGAG
 491 GACGAGCACA ACACATACAC AGNAGCTCAT GATTGANATG TAGTGNGGAG GTTNTCTNTN GCTCATANCC
 561 GTNTTNGCCA TNGNAACTNG GANACCATT TTAATTGCAG TGNNGGAGNG AACATGAAAT N

SEQ. ID NO: 68

1 GTTANNCCNN TTAAATNCNA TGGAGCTCCA AAGCAGTGGT AACAACGCAG AGTACGCCCC CGATGTACTT
 71 GTTCCTACTT TTTGCTGGAT TTGAAAACCT CCTCCTGTCC GTGATGGCCT ATGACCGGTT TGTGGCCATC
 141 TGTCACCCCC TGCACTACAT GGTCATTATG AACCTCACC TCTGTGGACT GCTGGTTCTA GCATCCTGGA
 211 CCATGAGTGC TCTGTATTCC TTGCTACAAA TCTTAATGGT AGTACGGCTG TCTTCTGCAC AGCCTTAGAA
 281 ATCCCCCACT TTTTCTGNGA ACTTAATCAG GTCATCCAAC TTGCTTGTTT TGATAGCTTT CTTAATCACA
 351 TGGTGATATA TTTTACAGTT GCGCTGCTGG GTGGAGGTCC CCTCACTGGG ATCCTTTACT CTTACTCTAA
 421 GATAATTTCT TCCATACATG CAATCTCATC AGCTTAGGGG AAGNACAAGG CATTTTCCAC CTGTGCATCT
 491 CACCTTTCAG TTGCTCCTTA TTTTATGGNG CAATCTAGGG GTGACCTTAG TTTTGCTGNC ACCCGCAACT
 561 CACACTTAAG TGCAACAACC TCAGTGATGT ACACTGGGGT CACCCCATGC C

SEQ. ID NO: 69

1 GNGNNNCAG NTTANNCCCTT GGACTCCAG TAGAGCTACN ANGANTNCGC CNAGCGCGCA NTTNNNCAG
 71 GGTNNTNTTN GTATACCAA TGAATAGAAA ACAGACACCA CCTTGTCCCT GCCTAGCAAG TAGCTGGAGC
 141 TGGGTCGCAA GTACACGAAA AGGGCTGTCC CAAACAGCAG AGTACCACC ATCAGATGCG AGGCACACGT
 211 GTTGCAGGCT TTCCATCGGC CCTCTGCTGA AGGGATCTTC AGGACCGCAG ACACTATGTA ACCATAGGAG
 281 ATAAGGAGTT GGAGGAACGA GTTTCCTCCG ACGGTGACCA CCACGAGGAA ATTCACCACT TGA CTGAGGA
 351 AGGTGTCAGA GCAAGACAGA GCCAGGACTG GTGGGAGGTT GCAGAAGAAG TGTTGATGA TGTGGGTCC

421 GCAAAAGTGA AGCCTAAATA TGGAGCTGGC CTGGATCAGG GAGCTCAGGA AGCCACCAAC ATATGCCCCA
 491 ACCACCATGC GTGTACAGAG GCCCTGGGTC ATGATAGTGG GGTANAGAAG GGGGCTGGAG ATGGCTTGCA
 561 TATCGGTCGT ATGCCATAGC AGTCANGAGG AGGCACTCAA GACAGACCCA TGCCGACNAA GAAAT

SEQ. ID NO:70

1 GNNNNNTTTTA CCCCTGNNGC ACANAGCAGT GGTNACAACG CNCGAGTACG CCCCCTATGT ATTTTTTCCT
 71 ATTCTGGACA CGCTACTCCT GACCGTGATG GCCTATGACC GGTTTGTGGC TGTCTGCCAC CCTCTGCACT
 141 ATATGATCAT CATGAACCCC CACCTCTGTG GCCTCCTGGT TTTTGTCAAC TGGCTCATTG GTGTCATGAC
 211 ATCCCTCCTC CATATTTCTC TGATGATGCA TCTAATCTTC TGTAAGATT TTGAAATTCC ACATTTTTTC
 281 TCGGAACTGA CGTACATCCT CCAGCTGGCC TGCTCTGATA CCTTCTGAA CAGCACGTTG ATATACTTTA
 351 TGACGGGTGT GCTGGGCGTT TTTCCCCTCC TTGGGATCAT TTTCTCTTAT TCACGAATTG CTTTCATCCAT
 421 AAGGAAGATG TCCTCATCTG GGGGAAAACA AATAGCACTT TCCACCTGTG GGTCTCACCT CTCCGTCGTT
 491 TCTTTATTTT ATGGGACAGG CATTGGGGTC CACTTCACTT CTGCGGTGAC TCACCCTTCC CAGAAAATCT
 561 CCGTGGCCTC GGTGATGTCA CTGNGGTCAC CCCCATGTTG ACCCTTTCAT TTACACCCTT AGCAAG

SEQ. ID NO:71

1 GNNNNNNNNN GTTNATNCCN NTTTAAATGC CANTNGAGNT AACAAACGCAN GAGTACNCCN NNGNGTACGC
 71 CCAGGGTTCA ACCNNTGAAT AGAAAAACAGA CACCACCTTG TCCCTGCCTA GCAAGTAGCT GGAGCTGGGT
 141 CGCAAGTACA CGAAAAGGGC TGTCCTCAAAC AGCAGAGTCA CCACCATCAG ATGCGAGGCA CACGTGTTGC
 211 AGGCTTTCCA TCGCCCTCTG CTGAAGGGAT CTTGAGGACC GCAGACACTA TGTAACCATA GGAGATAAGG
 281 AGTTGGAGGA ACGATGTTCC TCCGACGGTG ACCACCACGA GGAAATTCAC CACTTGACTG AGGAAGGTGT
 351 CAGAGCAAGA CAGAGCCAGG ACTGGTGGGG AGGTTGCAAG AAGAAGTGGT TGATGATTGT TGGGTCCCGC
 421 AAAAGTGAAA GCCTAAATAT NGAGCTGGCC TGGATCAGGG GAGCTCAGGA AGCCACAACA TATGCCCCAA
 491 CCACCATGCG TGTACAGAGG CCCTGGGTCA TGATAGTGGG GGTNGAGAAG GGGGCTTGA ATGGCTGCA
 561 TATCGGTCTG TGCCATAGCA AGTCAGGAGG AGGCACTTCA GACAGACCCA TGCCNCNAAG AAAAAAACT
 631 GNC

SEQ. ID NO:72

1 GNNNNNNNNN NTTNNNNCN TNACTCCNGC AGTGGTAACA ANNANTACGC NCAGCGCGCA GTTAACCCCTC
 71 ACTAANGGTA ANNTNAGCTG GAACACATCA NTACGNTCAN GNNNGCNCNA TGACCGGTTT GTGGNCATNT
 141 GTCACCCCTT GCACTACATG GGTCAATTATG AACCCTCACC TCTGTGGACT GCTGGTTCTA GCATCCTGGA
 211 CCATGAGTGC TCTGTATTCC TTGCTACAAA TCTTAATGGT AGTACGGCTG TCCTTCTGCA CAGCCTTAGA
 281 AATCCCCCAC TTTTCTGTG AACTTAATCA GGCATCCAAC TTGCTTGTTT TGATAGCTTT CTTAATCACA
 351 TGGTGATATA TTTTACAGGT TGCGCTGCTG GGTGGAGGTC CCCTGACTGG GATCCTTTAC TCTTACTCTA
 421 AAGATAATTT CTTNCATACA TGCAATCTCA TCAGCTCAAG GGGAAAGTCAA GGCATTTTTT ACCTGTGCAT
 491 CTACCCCTCA GTTGCTNCTT ATTTTATGGN GCAATCCTAG GGGTGACCTT AGTTCTGGTG GCACCCGCAA
 561 CTACACTCAA TGCACAAGCT CAGTGATGTA CACTGTGGCA CCCATGCTGA ACCN

SEQ. ID NO:73

1 GTNNNNNNNN TTGATTNCCA TTGGAGCTCC AAAGCAGTGG TAACAACGCA GAGTACGCCC CCTATGTATT
 71 TTTTCTATT CTGGACACGC TACTCCTGAC CGGGATGGCC TATGACCGGG TTGNGGCTGG CTGCCACCCT
 141 CTGNANTATA TGATCATCAT GAACCCCCAC CTNTGTGGCC TCCNGGTTTT TGNCACCTGG CTCATTGGTG
 211 TNATGACATN CCTCCTCCAT ATTTCTCTGA TGATGCATCT AATCTTCTGT AAAGANTTTG AAANTNCACA
 281 TTTTTTTNTG CGAACTGACG TACATNCTCC AGCTGGCCTG CTCTGATACC TTCTGAACA GCACGTTGAT
 351 ATACTTTATG ACGGGTGTGC TGGGCGTTTT TCCCTCCTTG GGATCATTTT CTTCTTATTC ACGAATTGNT
 421 TTNATCCATA AGGAAGAATG TCCTCATNTG GGGGAAAACA AATAAGCACT TTNACACCTG TGGGNCCTCA
 491 CCTCTTCCGN CGTTTCTTTA TTTTATGGGG ACAGGCATTT GGGGTCCCAC TTTACTTTTT GNGGNGACTC
 561 ACCCCTTCCA GAAAANTTTC CGTGGGCNTC NGGGATGTAC ACTGGNGGCA CCCCATGTT GAACCCTTTT

FIGURE 2

SEQ. ID NO: 111

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gggtcccntcg ngatatncntt naccctctga tgetgctcga gcggccggca gggatgatgga 60
tatctgcaga attcgccctt ctgttacgca ggaatatata aaggggttac tgaggaataa 120
ataaatgggt tactgaggaa taaataaatg gggtactgag gaacaaatac atagggttga 180
aagaactgta aaatagaaaa aggacctnt gctgctcctc aggatggcgg nacttagggg 240
ccatgtacat gacgatgng ctgccntna agagtccac tntcaneng cctcagcccg 300
ncttttntct caennncnt nttntctnc cctctnnnc tctttnttc ctattcccc 360
ccctccnct cctccctttt gcntnaccat tgnccctnat cctttaatt cnntcnntcn 420
tctccctctt attccttcnn tnttcgnctt cantctctnc ctctttctcc cctnctttct 480
ctentctnct ctctctctng tcatctctng tctttctctt ncttanttcc ctctancctt 540
ntcttatnct tctctatnct cctctcatct cactctctnt cctctentcn tactttnnct 600
nctcttccn cctcgtctnt cctttctctt tctnaccgac accctcennn cntnctctct 660
ntctctnct cactctctcc tctccctnct cntcactntt ctccnctct acntcctatn 720
ctcnctttct nctttnactt tgtcacgctc tctctctctt ctctacgcac nttttatctc 780
ttatctcnct catcnccctc nntctnctac nctattnact cttttctcnc atactntatn 840
ctcctntcn cttanctnc cctcctctct tnanccntc actgcn 886

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SEQ ID NO: 112

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gctgctcgag cngcgcagcg tggcagtggt nagggnnatn tgccnnntn gcnnttagat 60
nanaggntn agtatggggg tgaccacagt ggtacataac tgaggctgtt gcacttgagt 120
gtgagttgag ggtggcagca gaactaaggt acacccttag gattgcacca taaaataagg 180
agacaactga gaggtgagat gcacaggtgg aaaatgcctt gtacttcccc tgagctgatg 240
agattgcatg tatggaagaa attatcttag agtaagagta aaggatccca gtcaggggac 300
ctccacccag cagcgcaact gtaaaatata tcaccatgtg attaagaaag ctatcagaac 360
aagcaagttg gatgacctga ttaagttcac agaaaaagt ggggatttct aaggctgtgc 420
agaaggacag cgtactacc attaagattt gtacgaagga atacagagca ctnatggtcc 480
aggatgccag aaccagcagt cacagagggg gngggtttca tantgnccct gtagngtcag 540
cnnengacna gatggccnca aaccgntctt nggccctcac gncctggna ggnngtttct 600
tantccacca cnnntnttct nannc 625

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SEQ ID NO: 113

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catgcnngag caggctcgag cgccggcagn gtgagggata tctgcagaat tcgcccttcc 60
tatgtacttt ttctgagcg tatacacaat cccatcatgt actggggaga agncagacca 120
tatcattnac aagctgnctt tngcagatgn actttgnttt ctcattaggc tgcncagagt 180
acttctctct ggcagccatg gcttatgacc gctgtcttgc catctgctat cctttacact 240
acggagccat catgagtagc ctgctctcag cgcagctggc cctgggctcc tgggtgngtg 300
gtttcgcgcn cantgcagcg cccacagccc tcagnagcgg tcttgcctct ctgngncccc 360
cgtgccatta accactnctt tngcngcant gnccttgca ttgtcttgtc ctgccacca 420
nacagcagna nancntgngn cnnttngatc gctgntnccg tctcngntct cactccttcc 480
caccttttnc ntcgcatctc nntntcenn tcgcnctcct gncnntcnn tctcctcttc 540
tnaacgcgtc ctccgannng nctnnatgnt cgtctctntn ntgngcnng ncagcnnnnn 600
nnccannnn tngtgccgc gctcc 625

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SEQ ID NO: 114

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gnttaagccc tnnccctctn gangcatgct cgagcggccg ccagtgtgat ggatatctgc 60
agaattcgcc ctgtttccgc aaacaataga tgaaaggatt aagtgaagga gtgccaccg 120
catagaagag accaaagaac ttgccctccc ctggggcata cggatttttg ggctggaggt 180
agacagcnat gactgagctg tagaagaggg tgaccacagt gagatgggag gagcaggtcc 240
caaaggcctt tctccatgct gtggcagagt taatcctcag cactgcctgg gcagtggctc 300
cataagaggc aaggatgagg ctgagaggca caaccacgaa gatgacactg gacacagcca 360
actggatttc attgnaggag gcatctccac aggagagtn gnatcagaga tgggancctc 420
acataaaaaa gtcactctac tngtggtggg gacagaatgn ccatgtggag gntnnatgtn 480

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cgtntennac ctcttatttt tnttneccct ttcttttgegt cnntceccent tntceccnnet 540
cgccanttcc atnncntctt ntctnttttt ttntntnacc ntntntnecat ntctntctctt 600
tattctcttt ctcttgnctc tcccttctct ctctntnttcc canctctccc g 651

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SEQ ID NO: 115

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ggntctcggt acaanacttg gccctctaga tgcattgctcg agcgggccgcc agtggtgatgg 60
atatctgcag aattcgccct tccaatgtat ttatttctgt tatttggaga cctggagagc 120
ttctctcttg tggccatggc ctatgaccgc tatgtggcca tctgcttccc cctgcaactac 180
accgccatca tgagccccc gctctgtctc gccctgggtgg cgctgacctg ggtgctgacc 240
accttccatg ccatgtttaca cactttactc atggccagnt tgtgcttntg tncchnacna 300
ttgttgnctc cccactnnnc tntgtntna gtctnctctn cctnnactg ctctctctct 360
tntccnnga gtctcnggn nncgtngtgc nttnngcnn tcaattgcan tncnncntc 420
atcctttctt tantnttcca tntnttactc nattntctct tatcncnnt ntnccectcc 480
anctcctnct tagcttactn tttctgtctc tccngnctc ancttttctn ccataatntc 540
ttctctcncn tntctctcnc tnnnncccn nntctctgt ntctctgtc cntcttnacg 600
tctntnncet tatttantnt ctncncnctn tctcngctc cancgngta ccngccctat 660
nnctctctcc gannntgntc atggcatctn cacattngc cctactatnn ncgatctatn 720
ttcncgncat ntattncaca tccacntgca ctctactcnc ctctctance nccgtacatc 780
gcnctacng ntgnncntcn nccgctcctn cgcccnctn nctccactt tntctnggtc 840
ccccctctcg 850

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SEQ ID NO: 116

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gatgcatgct cgagcgcccc cagtgtgatg gatattctgca gaattcgccc ttccaatgta 60
ctttttcctg aagaacctct ctgttttgga tctgtgctac atctcagta ctgtgcctaa 120
atccatccgt aactccctga ctgcgagaag ctccatctct tatcttggct gtgtggctca 180
agcctatttt ttctctgctt ttgcatctgc tgagctggcc ttcttactg tcatgtctta 240
tgaccgctat gttgccattt gccacccctc ccaatacaga gccgtgatga catcaggagg 300
gtgctatcag atggcagta ccacctggct aagctgcttt tctacgcag ccgtccacac 360
tggaacatg tttcgggagc acgtttgcag atccaatgtg atccaccagt tcttccgtga 420
catccctcag gtgttggccc tggtttctct ngaggttttc tttgtagagc tttgaccng 480
ccctgagcct caatgcttg ntctgggatg ctttattccc atgatgatct ccnattttcc 540
anactctctn aanggggctc nagaatccct tnaggaccag antcnagta aaagcctttt 600
cccnctgct tccccccagc 620

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SEQ ID NO: 117

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tggcncctng atgcatgctc gagcgggccgc cagtgtgatg gatattctgca gaattcgccc 60
ttccaatgta ttgttctctg ttatttggag acctggagag ctctctctt gtggccatgg 120
cctatgaccg ctatgtggcc atctgcttcc ccctgcacta caccgccatc atgagcccca 180
tgctctgtct cgccctgggtg gcgctgtcct ggtgtgtgac caccctccac gccatgttac 240
acactttact catggccagg ttgtgttttt gtgcagacaa tgtgatcccc cactttttct 300
gtgatatgct tgctctgctg aagctggcct tctctgacac tctagttaat gaatgggtga 360
tatttatcat gggagggctc attcttgcac ccatctcta ctnatccttg ggtcctatgc 420
aagaattgtc tctccatcc tcaaggctcc ttcttctaag ggtatctgca aggcttctc 480
tacttgtggc tcccaccctg tctgnggtgt cactggttct atggaaccgt tattgtgtc 540
tacttatgct cntcagctaa tagttctact ctaaggaca ctgcatggct atgatgtaca 600
ctgtggtgac ccccatgctg aaccctt 628

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SEQ ID NO: 118

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gatgatgctc gagcggnccg agtgngatgg atatctgcag aattcgccct tcccatgtat 60
ttgttctgca gcaacctctc ctctctggag atttggata ccacagcagc agtgcccaaa 120
gactggcca tctactggg gagaagacag accatatcat ttacaagctg ccttttgag 180
atgnacnntg ttttctcant angcctaca gngnncatgt ttncgcnngc cntgacttat 240
gacgcgcntn cnnncntatc nnnntntnct ntncacncnac ttctcatna tntgnncntn 300

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nnttcnccn tggennctn nntcnegnc ttncctntgn ncgtentenc ccttnggcct 360
gcattctcnc ntnttcctnn ccnncgnnct ntctttcctt cntacctntt ttctgtntnn 420
tccctccctt ctctgnntgc nntcnncnn catctnnntg ntctgatcnc tntcttntnt 480
ccatcnngtn ctnttctctc gtntcttctn cncgccncc gcattcactgn gcattatatn 540
cncngtctca tnnctatctt ccgtntctgt cnccttctct ctatgcncga cgtcntntnn 600
tactatcgtc ntntcnntat tnnngcctgt tccnnngcnc ccgnncttcc anntactctc 660
cangntctc ntnttcctnt ncnctgtcta attcnntnt accgentctn gntctntcct 720
cgtenntccc nnttctctcc nctcnegnnn ccnttcagct ntcnnttct antnngnnn 780
cnc 783

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SEQ ID NO: 119

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nntagatgca tgcctgagcg gcccgccagt gtgatggata tctgcagaat tcgcccttcc 60
tatgtatttc ttctggcca acctgtcctt ctgggagacc tggtagatct ctgngactgt 120
gcccaagtta ctgtttagtt tttggtctgc gaacaacagc atctctttca cactctgtat 180
gatacaactg tacttcttca ttgctncat gngcacagaa tgcgtgcttc tggccgccat 240
ggcctatgac cgtatgttg ncatctggcg cccactccac tacccaacca taantgagcc 300
atgggctcct gctccnccct cgtntnnna tanngaaccn acagngtagc gncanctccc 360
tgtncgagaa tctacttcat cntnctgcct tanntntgt gggcccaatg tgcntaanca 420
cttngntctg nggacatttn ctccagnant tnaantctct tntcgnaca agnactgtt 480
cnttancttg annatnttn ggnacattnt tccatngnn ttggnacgag cntntctanc 540
accngcactn cncantaant gctncngtgc tantcngtgc cattcntgtg nctnccntt 600
tcatngcntn nccctccncc aaagcnaant aagtngngt cttnacttcc gccccccacn 660
ncatcnant ggcc 674

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SEQ ID NO: 120

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ggccctctag atgcatgctc gagcgccgc cagtgtgatg gatattctgca gaattcgccc 60
ttcctatgta ttttttctg ttatttggag acctggagag cctcctcctt gtggccatgg 120
cctatgaccg ctatgtggcc atctgcttcc cctgcacta caccgccatc atgagcccca 180
tgcctgtct cgcctgggtg gcgtgtcct ggggtgtgac cacttccat gccatgttac 240
acactttact catggccagg ttgtgtttt gtgcagacaa tgtgatcccc cactttttct 300
gtgatatgct tgcctgtctg aagctggcct tctctgacac tcgagttaat gaatgggtng 360
atatttatca tgnagggtc cattctgtc atccattcc tactcatcct tgggtcctat 420
gcgagaattg tctcctcct cctcaaaggc ccttcttct aangggatc tgcaaggcct 480
tctctacttg gtggctcccc cctgntctgt ggtgtcactg ttctatttg aaaccgntat 540
tgggactcta ctatgtctc tcatgctaat agttttact ttangggaca ctgncaatgg 600
cctntgaagn taccctggg gtggaccccc atnntngaac ccc 643

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SEQ ID NO: 121

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ggccctctag atgcatgctc gagcgccgc cagtgtgatg gatattctgca gaattcgccc 60
ttccaatgta ctttttctg ttatttggag acctggagag cttcctcctt gtggccatgg 120
cctatgaccg ctatgtggcc atctgcttcc cctgcacta caccgccatc atgagcccca 180
tgcctgtct cgcctgggtg gcgtgtcct ggggtgtgac cacttccat gccatgttac 240
acactttact catggccagg ttgtgtttt gtgcagacaa tgtgatcccc cactttttct 300
gtgatatgct tgcctgtctg aagctggcct tctctgacac tcgagttaat gaatgggtga 360
tatttatcat gggagggtc attcttgc atccattc ctcatccttg ggtcctatgc 420
aagaattgnc tcttccatc tcaaggnc tntttctaaa gggtatctgc aaggccttct 480
ctanttggtg ctcaccct gtcttgtggn tggcactgnt tctaattgga accggtaat 540
gnancnctna cnttatgctc natcaacta aatagtttct nactttnaaa gggaccactn 600
ntcattggct tanggatngn ncnttggtt cntggaaatc ccatcattc ttacnng 657

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SEQ ID NO: 122

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atgaccctna gatgcatgct cgagcggccg ccagtgtgat ggatatctgc agaattcgcc 60
cttccaatgt atttgttctt gtccaacctg tcttttttgg atattggctt tatctctaca 120
ataattccca atatgctaga tcatattagc tcaggaatta agctgatttc ttatggggag 180
tgtctgacac aactctatct ctctggccta tttgcagatc tggacaacaa ctttctcctg 240
gctgtgttgg ccttgaccg ctatgtggcc atcagccatc ctctccatta tggccctaacc 300
atgaactccc aacgctgtgt cctgttggtg gctgtgtcat gggtgatcac tattttacat 360
gccctagtgc ataccctcct agtgaccagg ctttccttct gtggtccaaa tattatccct 420
cacttcttct gtgatctggc cccactcctg aagctggcct gctccagtac ttgtgtcaat 480
gatctgggtg tcatccttgt ggcaggaaca ctgctgaatg cgccctttgc tgcattctta 540
tgnccactct ttacattgca ttggccatcc tgagaattga ttcccnagg ggtatgcaaa 600
gggcccttnt ccagctcnc nn 622

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SEQ ID NO: 123

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gcgncgcagt gtgatggata tctgcagaat tcgcccttcc aatgtatttg tttctgttat 60
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gcttccccct gcactacacc gccatcatga gcccctgct ctgtctcgcc ctgggtggcg 180
tgtctgggt gctgaccacc ttccatgcca tgttacacac tttactcatg gccaggttgt 240
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tggccttctc tgacactcga gttaatgaat gggtgatatt tatcatggga gggctcattc 360
ttgtcatccc attcctactc atccttgggt cctatgcaag aattgtctcc tccatcctca 420
aggtcccttc ttctaagggt atctngcaag gccttctcta cttgcggctc cacctgcctg 480
tgggtgcact gttctatgga accgttattg gtctctactt atgctcatca gccataaagt 540
tttactctaa aaggacactt gtcattggnnt atgatgtacn ctgtgngnac ccccatgctn 600
aaccctntn 610

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SEQ ID NO: 124

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ccttgggccc tctagatgca tgctcgagcg gccgccagt tgatggatat ctgcagaatt 60
cgcccttctt tattcctgag tgaatatatg agggggttgg cactgctgtt aagagtggac 120
aggaaaatgg aaactagacg aacgtgacaa atccacgtgg atccagaaaa ataggaatca 180
ctgaatgcca aagggcaggc cacagaggag gaagaccagc actctgagca ggatggtcat 240
gtacagcctg gtcaagggca tcttccggga tccacaaagg atcctgacca gcagaaccgg 300
gctggacccg cagagaacca cacataaaaa aatcagccat gtgactgtga tgaaatctga 360
tgtttcacac caaacagaat caagcaccac tagacaggaa gccacagaac atccattcca 420
ggatgctctg cagcagggac agggcccaga gcaggacaca cgactgctna ccaggtnntt 480
tngngtggct gcnagctctn cttaggatng tccccaagga ttgncnngn ccggtncctt 540
gnttgcttnt cgnnncccta nctatgcctt ngctcctgtg nangettgac nattggnctt 600
cnccacgng gcttaannnt ctcnngncgc atttanancg tnatnntact tcccttgtcg 660

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SEQ ID NO: 125

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gnccctctag atgcatgctc gagcggccgc cagtgtgatg gatattctgca gaattcgccc 60
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cctatgaccg ctatgtggcc atctgcttcc ccttgacta caccgccatc atgagcccca 180
tgctctgtct cgccctgggt gcgctgtcct ggggtgtgac caccctccat gccatgttac 240
acactttact catggccagg ttgtgttttt gtgcagacaa tgtgatcccc cactttttct 300
gtgatatgtc tgctctgctg aagctggcct tctctgacac tcgagttaat gaatgggtga 360
tatttatcat gggagggtct attcttgtca tccattcct actcatcctt gggctcctatg 420
caagaattgt ctctccatc ctcaaggctc cttcttctaa gggatatctgc aaggccttct 480
ctacttgnng ctcccacctg tcttngngng cactgttcta tgggaaccgg tattggtctc 540
tacttaatgc tcatcaagct aatagtctta ctctaaagga cactgncatg gctatgatgt 600
acactgtggt gaccccnat getgacccat tc 632

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SEQ ID NO: 126

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actacggagc	catcatgagt	agcctgctct	cagcgcagct	ggccctgggc	tcttggtgtg	180
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cccgtgccat	caaccacttc	ttctgtgaca	ttgcaccctg	gattgccctg	gcctgcacca	300
acacacaggc	agtagagctt	gtggcctttg	ngattgctgg	tgtggttatc	ctgagttcat	360
gcctcatcac	ctttgtctcc	tatgtggaca	tcatcagcac	catcccttcag	gatccccttt	420
gncagtggcc	ggagnaaaag	ncctttccac	gtgctcctcg	cntctcnncg	nggtgctcna	480
tttggtatgg	gtccacaagn	tnttctttca	cgncgggatt	ntccattcaa	aagatgncct	540
tgnnttttna	ncaaaagctt	ggncnncgnc	ctgaaanact	gnngtngact	tcangnttta	600
aaactccttt	natntcactn	ttangggaac	naggggcggn	ac		642

SEQ ID NO: 127

ntngnccctc	tagatgcatg	ctcgagcggc	cgccagtgtg	atggatatct	gcangaattc	60
gcccttccca	tgtatttatt	ccttagcctg	ttggattccc	agctgcacag	ctggattgtg	120
ttacacaact	caccttcttc	aagaatgtgg	aaanctataa	ttttttttct	gtgacccatc	180
tcaacttctc	aaccttgctt	gttctgacag	catcatcaat	aacatattat	gtattttaga	240
tatccctata	tttggttttc	ttccatttnc	agggatcctt	ttgncttacc	atanaattgt	300
cctcctccat	tccaagaatt	ccattgncag	acgggacgna	tnangccttc	tctacctgtt	360
cntctncccc	gnnagtcgnt	tntttatctn	tgnantnccc	tnngggcgncn	nccctgncct	420
cagcnttngt	cancnttctc	cncacnnntt	cgctcgtgtt	ncccagtnct	gtntctnctn	480
tctcntncnc	tttctgcctc	ccctccanng	tctnnctttc	tcagcncctt	tnngnncnct	540
gccagcncn	nangntccnc	ccctctccct	cntgtctnct	cntcctnttt	cttctnttcc	600
tnnctcatnn	nnncgncnc	ncgtctctcn	ccntntctn	tacgactccn	gncgtctctn	660
cgcctacgac	ctcctctgtc	ncnnccgg				688

SEQ ID NO: 128

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atatgctcac	tgacttcttc	tgggagcaga	agaccatata	atttgtgggc	tgtgctgctc	180
agtttttttt	ctttgtcggc	atgggtctgt	ctgagtgcct	cctcctgact	gctatggcat	240
acgaccgata	tgcagccatc	tccagccccc	ttctctaccc	cactatcatg	acccaggggc	300
tctgtacacg	catggtgggt	gnggcatatg	ttggtggctt	cctgagctcc	ctgatccagg	360
ccagnnccat	atttaggctt	cacttttgcg	gacccaacat	catcaaccac	ttcttctgcg	420
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tntcccgtgg	tgntcacntg	tcgngaggaa	acatcgnttt	cctccaaccc	cttantctcc	540
cangggntac	catagngtct	gcgngtcctt	gaagaatcct	tttngccaan	cgggcgaatn	600
gnaagccctn	ccaccgccc					619

SEQ ID NO: 129

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cttctgggag	cagaagacca	tatcatttgt	gggtgtgct	gctcagtttt	ttttctttgt	180
cggcatgggt	ctgtctgagt	gcctctcctt	gactgctatg	gcntacgacc	gatatgcngc	240
catctccagc	ccccctctcn	accccactat	catgacccag	ggcctctgta	cacgcatgga	300
ggtngcgccn	tatgntngtt	gnctnctnng	agctccctga	nccannnctn	ntcactatt	360
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nncttncnct ctnaacctnt cnnatectca cctnngatat cctcncgntc tttegnntc 660
nttcnctgtc cganntcctc anacnntcc ctanncg 697

SEQ ID NO: 130

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ccctaagatg ctgatgaaca tgcagactca gcacctagcc gtcttttaca agggatgcat 180
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ctgtgacctt ggtgccctgc tcaagtggc ctgctcagac acctccctca atnagtttag 480
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tggccacttg tggnnccnc tcneg 625

SEQ ID NO: 131

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tcgggttgcg gaaggaataa atacatcggt ttgcggaagg aataaatata tcgggttgcg 180
gaaggaataa atcatcggt tgcggaagga ataaatacat cgggttgcg aaggaataaa 240
tacctcggt tgcgtaagga ataaatcatt ggggtgcgta aggaataaat cattgggttg 300
cgtaaggaat aaatcattgg gttgcgtaag gaataaatca ttgngttgcg taaggaataa 360
atctttgtgc tggtagcat ctatcatggg gttacgaaag ggaagaaata cattggaang 420
ggcgaattcc agcacactgc cgnccgctac tagtgggatc cganctcggg accaagcttt 480
gatgcntagc ttgagtattt taacgcccgc aacctaaaat ngcnttggcc ttacnnttg 540
gaccnagctt gncttccctg cgtnaanttt cnttattcct cctntntntc ttctcccccc 600
ncanaatnnt nccccngntn anacnncann ttntatannc ctngngctcc cctantc 657

SEQ ID NO: 132

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actactgtga cataccaccc cttctccacc tggcttgtgc caacacagcc acagcaagag 480
nggncctcna tgncttttct gntctggcac ccttctggcn gctgcaggca ttctcacctc 540
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ggactcccca cttntgectc ccnn 624

SEQ ID NO: 133

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cagaagagg tgaccacagt gagatgggag gagcaggctc naaaggcctt tctccatgct 180
gtggnagagn taattctcag cactgcctgg gcagtcggct ncataagagg caaggatgag 240
gctgagaggc acaaccacga agatgacact ggacacangc caactgtatc cattgttaga 300
ggnatctcca caggagagtn gaatcagaga tgggacnttc acattaanaa gttatttatn 360
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canaccatt atctcangcc acatgtatnt cagctttttn ntncnntnt nagtntagtc 480
tngntgntnt ncnntattnn ccnntctttn tccntcann tatcattntc attccttncn 540
ncncanantt atggnnccnc cgnacnct cngtnactcc cctnnngncg 590

SEQ ID NO: 134

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tgatctctct	tgtttttccc	cacacactgc	aacctctgcc	tccacattca	agtgattctc	180
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agatgttttt	gaaacaaccc	ccaccagcac	tggagggagt	caaggggaaga	caagccaggc	300
atctgagctc	ctctgtctct	gccttttcctt	ctcactgtcc	ccagggtaac	ccgtcaccac	360
ccccatcacg	aacccttca	tctacacatt	acgtaacaag	ggcgaattcc	agcacactgg	420
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acgcntcacc	taaatagctt	ggcgtnatca	tngncccnag	cttgntttct	gtgtgaaatt	540
tgntatccgc	tcacaaattc	cacacaacat	acgagccnga	agcaataagn	nntaaagcct	600
gnggtgccna	angagnagac	taactcacia	ttaattncgt	tggctnactt	gcccc	655

SEQ ID NO: 135

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cccttccat	gtacttggtt	ctaagcaacc	tctccttcc	ggagatttgg	tataccacag	120
cagcagtgcc	caaagcaccg	gccatcctac	tggggagaag	tcagaccata	tcatttacia	180
gctgtctttt	gcagatgtac	tttgttttct	cattaggctg	cacagagtac	ttcctcctgg	240
cagccatggc	ttatgaccgc	tgtcttgcca	tctgctatcc	tttacctac	ggagccatca	300
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cacttcttct	gtgacattgc	accctggant	gcctgggect	gcaccaacac	cacaggcagn	480
aagagcttgt	ggcctttng	aatcgctgn	tggggctanc	cttnngtcat	gcccctnatca	540
ccntttntcn	netatgnngt	acantcatta	agcnccaatc	netcatggga	tccccctttg	600
cnagtggccc	ggcgngcnaa	ngnccctnctc	cccgtncen			639

SEQ ID NO: 136

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tccatcccca	aaatgctggc	caacattcat	acccagagtc	agatcatctc	gtattctggg	180
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ccccctctcg	entccctga	tcgtcctngt	ctaccctcnc	catctnatcc	ctcc	654

SEQ ID NO: 137

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aatgtatatt	tttctaagca	acctctcctt	cctggagatt	tggtatacca	cagcagcagt	120
gccc aaagca	ctggccatcc	cactggggag	aagtcagacc	atatcattta	caagctgtct	180
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ctcctagenc	tcatgnnnnc	cttgccctnt	gggnccntgn	nnatcaccct	nttntctgt	420
nacacttgta	cctcncgnet	tgcctnnnc	tgcttctaan	tccctnngtt	gtantnctn	480
gccttntctc	cccttcgctn	gttnatcttn	anntnctgnc	ntctntgncc	ctctccttcg	540
ttngaccctt	ntannncnc	tcttcttcnn	anntccctc	tatcncccg	ntnnccctcn	600
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SEQ ID NO: 138

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cagtgcctaa agcactggcc atcctactgg ggagaagtca gaccatatca tttaacaagct 180
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gtagcctgct ctcagcgcag ctggccctgg gctcctgggt gngtggnntc gtggccantg 360
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nngnttncnn gnetcggcnc cccctttgac ntantncntt gntgngcgt tatncntgcg 540
tttaatgncc ttaatnaaac tctcncctct catgttnttc nttntntng gnaccaantc 600
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nngtcnncc 670

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SEQ ID NO: 139

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agatgtactt tgttttctca ttaggctgca cagagtactt cctcttgga gccatggctt 240
atgaccgctg cttgccatct gctatccttt acactacgga gccatcatga gtagcctgct 300
ctnagcgcag ctgncctggg ctctgggtg ngtggttcng ngccattcag cgcacacagn 360
cttcatcagt ggncttgtn tcttgngccc ccgncatcn aaccantttc tctgngana 420
atngtacccc tgnanttgc ctggccttgt anccancaca tangctcgta tngcttctn 480
ntggcncncn tgnntcgnt ngtnnccng ntancngnc tnnacgtcct ttcnnacact 540
ttnnctctat gttntcaacn tcncngncta ttcgtcang atanccactc ttcnannnt 600
cggannnta nctttccnn acctcttct cntnc 635

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SEQ ID NO: 140

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cagcagtgcc caaagcactg ggccatccta ctggggagaa gtcagaccat atcatttaca 180
agctgtcttt tgcagatgta ctttgttttc tcattaggct gcacagagta ctctcctctg 240
gcagccatgg ctatgaccg ctgtcttgcc atctgctatc ctttactacta cggagccatc 300
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tcaacccacn tttctttttg nggatattgg caaccccntg gnatttgncc cctnggccct 480
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ggcctnggtg ngggnntaat tcnccttggg tttnaatgcc cttccaatna accttttgn 600
cnttctatg gngnnccct tnnattcnag caccacancc ttangggaa cnccttttt 660
gtcaagtng nccggtann naaaagccnt ntccnnntg cccccccg 709

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SEQ ID NO: 141

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agcagtgcct aaagcactgg ccactcact gggagaagt cagaccatat catttacaag 180
ctgtcttttg cagatgtact ttgttttctc attaggctgc acagagtact tcctcctggc 240
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gagtgcctg ctctcagcgc agctggccct gggctcctgg gtctgtggtt tcgtggcct 360
tgaagtgncc acanngccct atcagntggc cntgtccttc tgcnncccc cgtnncattn 420
nncacttctt tcgtgacatt gccannctnn tnttgccctn gtccttnncc natcatccat 480

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ggcngttngn gctgttggcc ctttcgctca cncngtctgc gccattctc nctgtnncaa 540
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nntcnnntnc g 671

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SEQ ID NO: 142

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gatcatctcg tattctgggt gtcttgacac gctatatttc ctcttatgt tnggnggcct 240
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gnccnatttc nttttcccn 739

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SEQ ID NO: 143

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caccacagac aggtgggagc cacaagtaga gaaggccttg cagataccct tagaagaagg 240
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ctttnaataa c 611

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SEQ ID NO: 144

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aagagggtga ccacagtgag atgggaggag caggccccaa aggcctttct ccatgctgtg 240
gnagagttaa tcctcagcac tgnctgggca gtggctccat aagaggcang gatgaggctg 300
agaggcacia ccacngaaga tgacactgta cacagccaac tgtattttat tgnaggnggn 360
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tacntccct cntccctcnt nttttcttct cncctnctc ttctttttnn cntntccnt 540
gtncnctnt atcttcccta ntncntcttt tntnctntt tngnnncctt cctctntctt 600
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SEQ ID NO: 145

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gagatttggt ataccacagc agcagtgcc aaagcactgg ccattctact ggggagaagt 180
cagaccatat catttacaag ctgtcttttg cagatgtact ttgttttctc attaggctgc 240
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ccctttgntc tctacnctct tncgnantca ctnnnatntc tnttcacng cncctcnnn 600
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ctnancantc tntcactct tccannenn tcnctgtct ctgactctc cctctntnt 720
nntncctcac cnnntacatg gtcccttntn ntccatctcg tcnntctctc cnnatacgn 780
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SEQ ID NO: 146

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gtanactgcc nttaattnga ccnctttccc nacnncac 639

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SEQ ID NO: 147

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cnatcttaca ggggtggcat catctnangg gngnntgca tctttnncta nntnncagg 540
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SEQ ID NO: 148

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SEQ ID NO: 149

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aagaagagtc ccactacgca gaggtgggag gagcaggtgg agaaggcctt tctgcggccc 240
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ngnnttattc	ggagagnntg	nnagacnggt	cancgttccc	gntcgttaga	caattancac	600
ccancngng	ccttcantna	tgtc				624

SEQ ID NO: 150

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tgtgctggca	gctggcatct	gtggcctggg	ttatgagtct	ggttcaatcg	atagtccaga	360
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<110> DigiScents; Yeda Research
Bellenson, Joel; Smith, Dexter; Lancet, Doron; Glusman, Gustavo;
Fuchs, Tania; Yanai, Itai

<120> OLFACTORY RECEPTOR SEQUENCES

<130> 422852000200

<140> 06/158,615

<141> 1999-10-08

<160> 2747

<170> FastSEQ for Windows Version 4.0

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<212> DNA
<213> Homo Sapien

<220>
<221> variation
<222> 3, 8, 11, 17, 28-29, 34, 40, 48, 67, 71, 613
<223> N can be any nucleotide

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 aaatgancgg nttaaggaga ggagtgaaga cagtaaaaaa acacagagat aaatttatca 120
 attgggaagc tttcaaaggg ccaaataagg atgaatatta atgggccaaa gaagagaagc 180
 acaacagtaa tgtgggcaga cagagtggga agggccttgg acatcccatc agaggcttgg 240
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 ggcagattga ctttgaatgc caggtgggtg gctgagtgtg agatgccaat ggcccaggaa 480
 acccccacca gaacagttca caccctccgg ttcattgatg ttatgtagtg cagaggtttg 540
 catatagcaa tgtatctatc ataggccatg gcaacaagaa gcaccatctc actaccccca 600
 aaaacatgca agn 613

<210> 2
<211> 578
<212> DNA
<213> Homo Sapien

<220>
<221> variation
<222> 3, 4, 6, 8
<223> N can be any nucleotide

<400> 2
 ggnntntnac acggactcca agcagtggta acaacgcaga gtacgcccgt tcctgagtga 60
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 cttgtctgaa agcttgggtg aaccacagtc catatagta aagatacctg aaccatagaa 180
 tatggcaacc acagtgaggt gggagccaca tgtggagaag gctttcttcc tgccctctac 240
 agagcgaatt cgcaggactg cagctgccac gtggatatag gagatgacaa tgagagccat 300
 ggggggtacct gccattataa aaccacagc aaaaagcagc agctcattga gttgggtgct 360
 ggagcaggag agctggaaga gctgtgggag gtcacagtag aagtgattga tcacattggg 420
 gccacagaag ttgagcgtgg acatggccac agtgtgggtc agtgcgttgg tgaaagcaca 480
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 tgaggggccc ggcagatggg caggaatcgg tcataggg 578

<210> 3
 <211> 588
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 4, 5, 13, 16, 27, 576, 578, 588
 <223> N can be any nucleotide

<400> 3
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 cgaagcgtgt agattagggg gttcagtagg ggagtgatga cagtgtagggt caccgagatc 120
 agctgggtcat gttctctggt gttctctgac ttgggcttga ggtaggcaat ggaggcacag 180
 ctgtagtggg caatgaccac agtgagggtg gatgcacagg tggcaaaagc cttcttccgg 240
 ccctcaactg aagtaatctt gaggattgta gagataatga gaacataaga aatgaaaacc 300
 agacccatag gtacaacaag caccagcaca ctgataatca aagtcaggat ttcattgaca 360
 gtgggtgtcaa tgcaggagag cttcatcaca gggcggatgt cacagaagaa gtggggcacc 420
 ttttctagca cagaagggtg acctgaatac agatgtcact tgcgttattg ctacaatcag 480
 cccaatgctg caaggccccc aggacaagtt ggatacgag cctcttggtc ataataacca 540
 tgtatctcaa ggggggttgca agatggccac atagcngntc atattccn 588

<210> 4
 <211> 583
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 3, 7, 13, 437, 485, 488, 506, 521, 524, 545, 558
 <223> N can be any nucleotide

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 tgtatttttt tttgagaaac ttgtctttct tagatttttg ttacatctct gtcacaattc 120
 caaaatctat tgtagttcc ttgactcatg atacttccat ttctttcttt ggggtgtgctc 180
 tgcaagcctt ctttttcatg gacttggtgcaa ctacggaggt agccatcctt acagtgatgt 240
 cctgtgaccg ctatatggcc atctgccggc ctttacatta tgaggtcata ataaaccaag 300
 gtgtctgtct gaggatgatg gccatgtcgt ggctcagtg ggtgatctgt ggattcatgc 360
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 gtaatatccc acaactncta agcctcttag accccaaagt aattaccatt gagattggag 480
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<210> 5
 <211> 584
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2, 5, 8-9, 11, 14, 17, 550, 557-559, 561, 576, 582
 <223> N can be any nucleotide

<400> 5
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 gccctcaggt gaattatttg atttaggccg gaagtaggtg aggcttaatg atatatagaa 180
 aagagagaca acaaggaggt gtgaggaaca tgtagaaaag gctttattct tccctttagc 240
 tgatgggatc ttgaggatgg cagcagcaat gcgagtatag gaacacaaga tcagcaagca 300

ggggatcatg	accaccagaa	tgggtccgac	gatggcgtag	atctcaaaca	gtgctgtgtc	360
tgcacagacc	agcctcagca	cagggtgggct	gtcacagaag	aagtgggtca	ccttggtggg	420
gccacagaat	ggaaaactga	agagccatgt	ggtctgcaca	gtagctacag	gaaagcctgg	480
gaaccaggag	gcagcagcca	gtttggcacg	agtcctttgg	ttcatgatga	ctgggtagtg	540
caagggactn	gcagatnnnc	ncattcgggtc	atatgncatg	gnag		584

<210> 6

<211> 572

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2

<223> N can be any nucleotide

<400> 6

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gaaaggggtc	aggggtcggg	gcacgactgt	gtagaacgca	gacaggaaaa	catccagaac	120
ggggggagaa	tttgaaattg	gcttcacata	ggcaatgctg	ccagatatca	taaagagtgt	180
tacaaccaca	agatgtggaa	tgcaggtaga	aaatgttttt	gatctaccct	ccttagaagg	240
aatcctcatg	atgacagaaa	aaatgtacat	gtaggagaga	gtaattacaa	caaaggagat	300
tatcacaaaga	cttgtacca	aaaccatgac	tccaatctca	atggtaatta	ctttgggggtc	360
taagaggctt	aggagtttgt	ggaatattac	agaaaaattg	acgtattcta	ttgcgcccac	420
agaatggtaa	tgagaatggt	gctatcacat	gcatgaatcc	acagatcacc	ccactgagcc	480
acgacatggc	catcatcctc	agacagacac	cttggtttat	gatgacctca	taatgtaaag	540
gccggcgagga	tggccatata	gcggtcatag	ga			572

<210> 7

<211> 549

<212> DNA

<213> Homo Sapien

<400> 7

gcagtggtaa	caacgcagag	taccgcccc	tatgtacttt	ttcttgggaa	acttgtctgt	60
gtttgacatg	ggtttctcct	cagtgacttg	tcccaaaatg	ctgctctacc	ttatgggggt	120
gggcccagctc	atctcctaca	aagactgtgt	ctgccagctt	ttcttcttcc	atttctctcg	180
gagcattgag	tgcttcttgt	ttacggtgat	ggcctatgac	cgcttccactg	ccatctgtta	240
tcctctgcga	tacacagtca	tcatgaaccc	aaggatctgt	gtggccctgg	ctgtgggcac	300
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tcgtacaac						549

<210> 8

<211> 548

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 537, 542

<223> N can be any nucleotide

<400> 8

ggaacaacgc	agagtgcgcc	ccgatgtact	tgtttcttctc	caacctgtcc	tttgctgaca	60
tttggtttac	ttccaccacc	attccaaaaa	tgctgatgaa	catccagaca	cagaacaaag	120
tcatcaccta	catagcctgc	ctcatgcaga	tgtatTTTTT	catactcttt	gctggatttg	180
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tgagtgtctt	gtattccttg	ctacaaatct	taatggtagt	acgactgtcc	ttctgcacag	360
ccttagaaat	ccccacttt	ttctgtgaac	ttaatcagg	catccaactt	gcttgttctg	420
atagctttct	taatcacatg	gtgatataat	ttacagtttg	cgctgctggg	tggagggtccc	480
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gntcaggg						588

<210> 9
 <211> 583
 <212> DNA
 <213> Homo Sapien

<220>
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 <222> 8, 13, 14, 16, 25, 232, 271, 305, 438, 488, 497, 500, 505, 512, 524, 544, 558, 578
 <223> N can be any nucleotide

<400> 9						
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ttgggttgat	cccttgagat	ggaggagggg	ggctgaaggt	acatgctgat	ggctgggcca	180
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catantggga	cagctaacat	aaaaatgcat	accacagaga	gtgtgagctc	gttagaaccc	360
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ttgagaccac	acagtggnaa	tttgtattgt	ggcagtggcc	ctctgagaac	ggcatagatt	480
ataccaantt	aaccacnacn	gcggnaacta	angattcaga	cgcncctggat	tcatgatgag	540
ggtntagtga	agaggttntc	agaatggcca	cataccgntc	aaa		583

<210> 10
 <211> 569
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 7, 28, 174, 232, 237, 314, 341, 445, 447, 449, 470, 494, 497, 503, 510, 515, 527, 553, 554, 569
 <223> N can be any nucleotide

<400> 10						
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tctgtctctc	ctggatgtct	gcttcatac	cactaccatc	ccacagatgt	tgatccacct	120
cgtggtcagg	gaccacattg	tctcctttgt	atgttgcacg	accagatgt	actntgtctt	180
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<210> 11
 <211> 582
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 3-4, 12, 14, 504, 513, 522
 <223> N can be any nucleotide

<400> 11
 ggnntttttac cncnattgga gctccaaagc agtggttaaca acgcagagta cgccccctat 60
 gtacttggtc ttgagaaact tgtctttctt agatttttgt tacatctctg tcacaattcc 120
 aaaatctatt gttagttcct tgactcatga tacttccatt tctttctttg ggtgtgctct 180
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 ctatgaccgc tatatggcca tctgccggcc tttacattat gaggtcatca taagccaagg 300
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 tgtgatagca acattctcat taccattctg tgggcgcaat agaatacgtc aatttttctg 420
 taatattcca cagctcctaa gcctcttaga ccccaaagta attaccattg agattggagt 480
 catggttttt ggtacaaggc ttgngataat ctnttttggg gnaattactc tctcctacat 540
 gtacattttt tctgcatcat gaggattcct tctaaggagg gg 582

<210> 12
 <211> 579
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 3, 384, 528, 572, 578
 <223> N can be any nucleotide

<400> 12
 ggnntttgacc acggagctcc aagcagtggt aacaacgcag agtacgccct cttgtcctcg 60
 tgccgataca tgatgggggt caacatggga gtcataacag tgtaggacaa tgatagcagc 120
 ttcttgccct caggtgaatt atttgattta ggccggaagt aggtgaggct taatgatata 180
 tagaaaagag agacaacaag gaggtgtgag gaacatgtag aaaaggcttt attcttccct 240
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 ttggtgccac agaatggaaa actgaagagc catgtggtct gcacagtagc tacaggaaag 480
 cctgggaacc agggagtagc agccagtttg cacgagtccc tttggttnat gaatgactgg 540
 ggtagtgcaa gggactgcag atggccacat ancggctent 579

<210> 13
 <211> 577
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2-4, 7-10
 <223> N can be any nucleotide

<400> 13
 gnnnttnnnn ccaactggagc tccaaagcag tggttaacaac gcagagtacg cccccaatgt 60
 atttattctt gtcacacctc ccttagttga tatctgtttt accaccagta ttgtcccca 120
 gctgctgtgg aacctaataa gacctgacaa aacaatcaca ttcttggtgt gtgtcatcca 180
 gctctacatc tccctggcat tgggtctccac tgagtgtgtc ctcttggtgt taatggcttt 240
 tgatcgctat gctgcagttt gcaaacctct ccactatacc gccgtaatga accctcagct 300
 gtgccaggct ctggcagggg ttgcgtggct gagtggagtg ggaaacactc ttatccaggg 360
 cactgtcacc ctctggcttc ctctgtgtgg acaccgattg cactaacatt tcttcgtgag 420
 gtaccctcca tgattaagct tgcattgtgt gacatccatg ataattgaggt tcagctcttt 480
 gttgcttcac tgggtcttgc cctcttgccc ttagtgctaa tactgctgcc tatggacata 540
 tagccaaggt ggcataagga tcaagtcagt ccagcct 577

<210> 14
 <211> 577
 <212> DNA
 <213> Homo Sapien

<220>

<221> variation

<222> 3-4, 6, 8, 252, 375, 474, 506, 515, 532, 541, 545-546, 556, 562, 573

<223> N can be any nucleotide

<400> 14

ggnntntnac	tccatggact	ccaagcagtg	gtaacaacgc	agagtacgcc	catacatgat	60
gggggttcagt	aggggagtg	tgacagtgt	ggtcaccgag	atcagctggt	catgttctct	120
ggtgttctct	gacttgggt	tgaggtaggc	aatggaggca	cagctgtagt	ggacaatgac	180
cacagtggag	tgggatgcac	aggtggcaaa	agccttcttc	cggccctcaa	ctgaagcaat	240
cttgaggatt	gnagagataa	tgagaacata	agaaatgaaa	accagacca	taggtacaac	300
aagcaccagc	acactgataa	tcaaagtcag	gatttcattg	acagtgggtg	caatgcagga	360
gagcttcac	acagngcgga	tgacacagaa	gaagtggggc	acctttctag	cacagaaggg	420
taacctgaat	acagatgtca	cttgcggtat	tgctacaatc	agcccaatgc	tgcngggccc	480
caggacaagt	tggatacgca	gccttntcgt	tctantaacc	atgtatctca	angggcttgc	540
ngatnnccac	atactngcat	anaccattgc	tgngagc			577

<210> 15

<211> 583

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2, 5, 7, 13, 427, 485, 488, 532, 559, 569, 574, 583

<223> N can be any nucleotide

<400> 15

gncgntntta	acnccattgg	agctccaaag	cagtggtaac	aacgcagagt	acgcccatta	60
cgaaaagtgt	agatgaaggg	gttcaagagg	ggtgtgatga	tgcagctcag	gacggaggca	120
cctttgttga	gcagtttgga	ctgagcctct	gacatacgaa	tgtagagaaa	gatggaactg	180
ccatagatga	tgaccaccac	tgtaagatgc	gaggcgcaag	tggaaaacgc	tttccttcgc	240
tcagcagctg	tagggggcct	gagaacagtg	gcaagaatgc	aggcatagga	aactgaggtc	300
agagccagtg	agcccagtaa	caccaacgta	gagagcatga	aagccaccag	tttcagcagg	360
tgggtgtccc	cacaagaaa	cctgagcaag	ggccaactgt	cacgaaagaa	gtggtcaata	420
ccattgnggc	cacagaaaag	catggctggc	catgaggaca	gtggggcaaa	ggaccagag	480
gaatncanct	agccaggagg	ccacactagt	ttgtgaacag	acatggccat	tnattagggt	540
ctcatagcgg	agttgtcgnc	agatttgcnt	ggtnacgatt	can		583

<210> 16

<211> 577

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 3-4, 12, 14, 549

<223> N can be any nucleotide

<400> 16

ggnnttttac	cncnattgga	ctccaaagca	gtggtaacaa	cgagagtag	gccccctatg	60
tattttattct	tgctcacctc	tccttagttg	atatctgttt	taccaccagt	attgtcccc	120
agctgctgtg	gaacctaaaa	ggacctgaca	aaacaatcac	attcctgggt	tgtgtcatcc	180
agctctacat	ctccctggca	ttgggtctca	ctgagtgtgt	cctcctgggt	gtaatggctt	240
ttgatcgctg	tgctgcagtt	tgcaaacctc	tccactatac	cgccgtaatg	aacctcagc	300
tgtgccagtc	tctggcaggg	gttgctgtgg	tgagtggagt	gggaaacact	cttatccagg	360
gcactgtcac	cctctggctt	ccccgctgtg	gacaccgatt	gctccaacat	ttcttcgtga	420
ggtaccctcc	atgattaagc	ttgcatgtgt	ggacatccat	gataatgagg	ttcagctctt	480

tgttgcttca ctggctcttgcc tctctcttgcc cttagtgtcta atactgctgc ctatggacat 540
 atagccaang tggcataaag gatcaagtca gtccagg 577

<210> 17
 <211> 621
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2-5, 8, 13, 618
 <223> N can be any nucleotide

<400> 17
 gnnnntnttt cantccattg ggccctctag atgcatgtc gagcgccgc cagtgtgatg 60
 gatatctgca gaattcgccc ttattccgga gggatatacat gaagggattg gtaactagac 120
 gtaaaactcga agccaagaac agaatttctc ttagaaaaga gaattgaaac taaagagaaa 180
 gaactagcaa agaaggaaat attgaatata caagagagag gagacagatg atggaacaag 240
 actctgaaag aggtggaagg gattgaatac aatcaaaagt atggtgactg ctagtctcaa 300
 gatggtggcg taggggcaag ctggctttgc ttacccccct ggcagaaaac caaaaacaaa 360
 tagcaccaag attatcacta gcaatatccc agaactcaca tataaggatg agacagttcc 420
 caggggccag agaagatcag aagcacaagt gggagaagtc agctttggat gctactttgt 480
 tctaagggag acaagttggg aggatgattg cagatgtata ttcaatgtta taaaacagcc 540
 cataaaaaca agattggaaa atgttgatt ttgcaaccag gagcaaatac tgggaaaggc 600
 gaattccagc cacttgcneg c 621

<210> 18
 <211> 615
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2-5, 8, 10, 14, 21, 583
 <223> N can be any nucleotide

<400> 18
 gnnnnttnan tcantgccct ngggccctct agatgcatgc tcgagcgcc gccagtgtga 60
 tggatatctg cagaattcgc cttgtgtgag caagggtgtaa atgaaagggg ttgcgcagga 120
 gtaaatgaag ggattacgca ggagtaaattg aagggtattac gcaggagtaa atgaagggat 180
 tacgcaggag taaatgaagg gattacgcag gagtaaattga agggattacg caggagtaaa 240
 tgaagggatt acgcaggagt aatgaaggg attacgcagg agtaaattgaa gggattacgc 300
 aggagtaaat gaagggatta cgcaggagta aatgaaggga ttacgcagga gtaaatgaag 360
 ggattacgca ggagcaaata cataggaagg gcgaattcca gcacactggc ggccgttact 420
 agtggatccg agctcggtac caagcttgat gcatagcttg agtattctaa cgcgtcacct 480
 aaatagcttg gcgtaatcat ggtcatagct gtttctctgtg tgaaattgtt atccgctcac 540
 aattccacac aacatacgag cccggaagca taaagtgtaa agnctggggg gcctaattgag 600
 tgacttactc catta 615

<210> 19
 <211> 696
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2-3, 5, 7, 287, 300, 309, 313, 328, 331, 343, 345, 347, 360, 366,
 386, 388, 391, 394, 401, 407, 416, 420, 428, 432, 434, 437, 441,
 443, 448, 450, 452, 457-458, 463, 476, 484-485, 493, 503, 506, 514,
 518, 520, 524, 528, 540, 541, 548, 550, 553-554, 557, 561-562,

566-568, 571-572, 575, 582, 584-585, 587-588, 603, 607, 614,
620,
623, 627, 629, 641, 648, 652, 661-662, 665-666, 668, 672, 675, 678,
684, 695

<223> N can be any nucleotide

<400> 19

gnnantnatt	ccatccattg	tcccttcaga	tgcattgctg	agcggccgcc	agtgtgatgg	60
atatctgcag	aattcgccct	tcttggtttt	tgtgctgata	gatcatggga	ttcagcatgg	120
gggtgaccac	agtgtacatc	actgaggctg	ttgcacttga	gtgtgagttg	cgggtggcag	180
cagaactaag	gtacaccctt	aggattgcac	cataaaataa	ggagacaact	gagaggtgag	240
atgcacaggt	ggaagatgcc	ttgtacttcc	cctgagctga	tgagatngca	tgtatggaan	300
gaaattatnt	tanaagtaag	agtaaagnat	nccagtcagg	ggnancnttc	acccatcagn	360
tgcaanttgt	aaaaattata	ttcaancnat	ntgnatttaa	ngaaaaancct	tatcangtan	420
acactgcnaa	gntntgnatt	nanccctngn	anttaanntt	tcnacaagaa	aataangtgc	480
gttnnaatct	ttntaagtec	ctntcnccat	taangtcnan	tccntccnta	tcccttttcn	540
nattttgnan	tcnngantac	nntctnnngc	nntcnatttc	tntnntnnct	gacctactaa	600
ccnattnagt	tacnacaagn	ccnttcnant	ctctataatt	nctcgcangt	tntccctctt	660
nncanntncc	cnttntntc	cctnttcccc	atctnc			696

<210> 20

<211> 615

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 495, 545, 582, 600

<223> N can be any nucleotide

<400> 20

ccattggccc	tctagatgca	tgctcgagcg	gccgccagtg	tgatggatat	ctgcagaatt	60
cgcccttccct	atgtattttc	tcttactggg	ctttcctggg	tctcaaactc	ttcagctctc	120
tctctttatg	ctttttctgg	tgatgtacat	cctcacagtt	agtggtaatg	tggctatctt	180
gatgttggtg	agcacctccc	atcagttgca	tacccccatg	tacttctttc	tgagcaacct	240
ctccttcctg	gagatttggt	ataccacagc	agcagtgccc	aaagcactgg	ccatcctact	300
ggagagaagt	cagaccatat	cattttacaag	ctgtcttttg	cagatgtact	ttgttttctc	360
attaggctgc	acagagtact	tcctcctggc	agccatgggt	tatgaccgct	gtcttgccat	420
ctgctatcct	ttacactacg	gagccatcat	gagtagcctg	ctctcagcgc	aactggcctt	480
gggcttctgg	gtggntgggt	tcggggggcaa	tgccagtgccc	acaggccttc	aatcaagtgg	540
gctgntcctt	ctgggtggccc	ccgggtgccaa	tcaaccaactt	tntttttggg	acaattgcan	600
ccctggaatt	ggccc					615

<210> 21

<211> 745

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2-3, 8, 21, 23, 26, 33, 43, 116, 201, 212, 222, 239, 252, 279, 282,
288, 292-293, 308, 320, 325, 328-330, 333-334, 339-341, 344, 354, 360, 365,
372, 377, 382-383, 388, 390, 394, 397, 402, 415, 418, 422, 424-425, 427, 431,
436, 441, 445, 450, 451, 457, 466, 493, 495, 498, 501, 508-509, 513, 515,
517-518, 520-523, 525, 528-529, 535, 538, 540-542, 544-546, 548-550, 553,
555, 565, 584, 586, 592-593, 607-608, 615, 617, 619, 621, 634, 636-637, 644-
645, 651, 656, 662, 671, 685, 693, 697, 699, 710, 714, 735, 737, 740, 745

<223> N can be any nucleotide

<400> 21

gnncttantt	caatcccacc	nancentgcc	gangcatget	cgngcggccg	ccagtgtgat	60
ggatatctgc	agaattcgcc	cttcctatgt	atttactctt	actgggcttt	cctggntctc	120
aaactcttca	gctctctctc	tttatgcttt	ttctgggtgat	gtacatcttc	acagttagtg	180
gtaagtgtgg	tatcttgatg	ntgggtgagca	cntcccatca	gntgcatacc	cccatgttnt	240
tctttctgag	cnacctctcc	tctctggaga	tttggtatnc	cncaagcngc	anngccaaa	300
gctttgcnca	tcttattgen	cagangcnnn	ccntacann	nacnctcctg	ttntctgctn	360
ccttnctctt	tncttctctc	anntactnct	tctnctntag	tncttttctt	ctctntctct	420
cntnnctct	ntaatnttcc	ncctnttctn	ntttctnttt	tccctnctct	gtttcacccc	480
tacctcttat	centnctnct	nacttcannc	tcngncnntn	nnncnccnnt	aaatntangn	540
nnannntnnn	atntnctctt	ctccttttat	atcgctctct	ctctnctctc	cnnttctctc	600
tctcannca	tatcnantnt	nttctactct	cgtnccntat	ctannctcct	ntttcngtcc	660
tncttctcct	ntcatttcta	tattnttctt	canacantnt	tcgcatcgtn	gcancatctc	720
ctcccatctc	ctgtncnctn	tccn				745

<210> 22

<211> 614

<212> DNA

<213> Homo Sapien

<220>

<221> 2-4, 9, 19, 23, 47, 613

<222> (3)...(3)

<223> N can be any nucleotide

<400> 22

gnmnttaant	cattcccnc	tcnatgcatg	ctcgagcggc	cgccagngtg	atggatatct	60
gcagaattcg	cccttgtttc	ggaggcagta	gatgaatggg	ttgatggaat	ctgagacagt	120
gctctagaat	ctgtgtttca	tacaggatga	gatataaatg	aaacaaatgc	taaataatga	180
cacaaggtag	cttgccgaga	gaggaatcat	ccacctggaa	gggtaggctg	tttgtgaata	240
atgtagggtg	ggagagaagg	ctttactaag	gagatgggct	taaagaatgt	gaacgatgtg	300
ctcacagagg	ccacagaaga	gaaattatag	ccaggagaac	aacctgaaag	acaaaggaca	360
cggtggcatg	agcgcatgta	acacaatgta	ctcaggaaat	ggctggcatc	ctgagatatg	420
gagtggaaata	cagtacaggg	ctttgtaaac	tcagcttgga	gtcagatcac	agaaagcctt	480
gacaaggaac	tgaaaatggg	ttctgaaggc	cagaagccca	ttcaagattc	ccaaagggaa	540
aaacacaaat	cagcttggtt	tcaggacgta	attcttggtg	gttgctagaa	ttacatcaga	600
aaggaggttc	acnt					614

<210> 23

<211> 621

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2-4, 6, 8, 12-13, 16, 507, 561, 583, 592

<223> N can be any nucleotide

<400> 23

gnmntnante	anncantggg	ccctctagat	gcatgctcga	gcgcccgcca	gtgtgatgga	60
tatctgcaga	attcgccctt	cctatgtatt	tcctcttact	gggctttcct	ggttctcaaa	120
ctcttcagct	ctctctcttt	atgctttttc	tggtgatgta	catccccaca	gttagtggtg	180
atgtggctat	cttgatgttg	gtgagcacct	cccatcagtt	gcatacccc	atgtacttct	240
ttctgagcaa	cctctccttc	ctggagattt	ggtataccac	agcagcagtg	cccaaagcac	300
tggccatcct	actggggaga	agtcagacca	tatcatttac	aagctgtctt	ttgcagatgt	360
actttgttat	ctcattagge	tgcacagagt	acttcctcct	ggcagccatg	gcttatgacc	420
gctgtcttgc	catctgctat	cctttacact	acggagccat	catgagtagc	ctgctctcag	480
cgcagctggc	cctgggctcc	tgggtgnggg	ggttcgtggc	cattgcaagt	gcccacaagc	540
cctaatacagt	ggcctgtcc	ntctgggggc	ccccgggcca	ttnaccactt	tnntctggga	600
caattgcacc	cctggaattg	g				621

<210> 24

<211> 612
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2-3, 8, 16, 20, 26, 557
 <223> N can be any nucleotide

<400> 24
 tnnttaantc attcctnttgn ccctcnagat gcatgctcga gcggcccgcca gtgtgatgga 60
 tatctgcaga attcgccctt tccttggttac tgaggagta gattagggga ttgatggaat 120
 ctgagacagt gctctagaat ctgtgtttca tacaggatga gatataaatg aaacaaatgc 180
 taaataatga cacaaggtag cttgccgaga gaggaatcat ccacctggaa gggtaggctg 240
 tttgtgaata atgtagggtg ggagagaagg ctttactaag gagatgggct taaagaatgt 300
 gaacgatgtg ctcacagagg ccacagaaga gaaattatag ccaggagaac aacctgaaag 360
 acaaaggaca cgggtggcata agcgcatgta acacaatgta ctcaggaaat ggctggcatc 420
 ctgagatatg gagtggaata cagtacaggg ctttgtaaac tcagcttgga gtcagatcac 480
 agaaagcctt gacaaggaac tgaaaatggg ttctgaaggc cagaagccat tcaagattcc 540
 caaagggaaa aacacanatc acttggtttc aggacgtatt cttgggcagt tgctagaatt 600
 acatcagaaa gg 612

<210> 25
 <211> 632
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2-5, 9, 614
 <223> N can be any nucleotide

<400> 25
 gnnnttant ccattgccct ctagatgcat gctcgagcgg ccgccagtgt gatggatatac 60
 tgcagaattc gcccttgttt cgcagcctat aaatgaaggg gttgatggaa tctgagacag 120
 tgctctagaa tctgtgtttc atacaggatg agatataaat gaaacaaatg cttaaataatg 180
 acacaaggta ccttgccgag agaggaatca tccacctgga agggtaggct gtttgtgaat 240
 aatgtagggt gggagagagg gctttactaa ggagatgggc ttaaagaatg tgaacgatgt 300
 gctcacagag gccacagaag agaaattata gccaggagaa caacctgaaa gacaaaggac 360
 accggtggca taagcacatg taacacaatg tactcaggaa atggctggca tcctgaggta 420
 tggagtggaa tacagtaccg gggctttgta aactcagctt ggagtcagat ccagaaagcc 480
 cttgacaagg aactgaaaat tgggttcttg aaggccagaa gccattcaag gattccccaa 540
 aggggaaaaa cacaaatcaa gcttggtttc agggaccgtt aattctgggg ccaggttgct 600
 tgaattacct tcangaaagg gaggttcaca ct 632

<210> 26
 <211> 628
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2-3, 419, 423, 426, 437, 439, 453, 460, 463, 469, 478, 489, 492,
 536, 539, 579, 583, 586, 594, 598, 616, 623, 627
 <223> N can be any nucleotide

<400> 26
 gnncttattc atccccctct agatgcatgc tcgagcggcc gccagtgtga tggatatctg 60
 cagaattcgc ctttcttttg ttctcagag tgtagattag ggggttgatg ggggttgatg 120
 aatctgagac agtgctctag aatctgtgtt tcatacagga tgagatataa atgaaacaaa 180
 tgctaaataa tgacacaagg taccttgccg agagaggaat catccacctg gaagggtagg 240

ctgtttgtga	ataatgtagg	gtgggagaga	aggctttact	aaggagatgg	gcttaaagaa	300
tgtgaacgat	gtgctcacag	agggcacaga	agagaaatta	tagccaggag	aacaacctga	360
aagacaaagg	acacggtggc	ataagcgcat	gtaacacaat	gtactcagga	aatggctgnc	420
atnctnagat	atggagngng	aataccagta	canggctttt	tanactcanc	ttggagtnc	480
gaatcacana	angccttgca	aggaactgaa	aatgggttct	gaaaggccag	aagcctttna	540
agattcccaa	agggaaaaaa	cacaaatcaa	gcttttttna	agnacngtaa	ttcntggngc	600
cagttgctta	gaattnccat	canaaang				628

<210> 27

<211> 803

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 3-4, 19, 168, 190, 202, 245-246, 250, 260, 266, 280, 281, 284, 286, 289, 301, 303, 305, 313, 332-333, 348, 355, 357, 360, 365-366, 370, 372, 376, 379, 384, 387-390, 394-396, 400, 406-407, 411-412, 416-418, 421, 423, 430, 439-440, 442-443, 446, 448, 462-463, 468-469, 480, 482-483, 490, 493, 498, 506-508, 518-519, 523, 532, 534, 536, 539, 547, 549, 556, 559, 573-575, 580-581, 587, 590, 595-596, 600-601, 603, 612, 614, 618, 623, 629, 633, 640, 643, 646, 655-656, 658, 666, 682, 689, 696, 704, 708-709, 718, 721, 732, 738-739, 743, 746, 751, 759, 764-765, 771, 775, 782-783, 788-789, 791-792, 795, 801

<223> N can be any nucleotide

<400> 27

ggnttaagcc	ttccccctnc	gatgctgctc	gagcgccgc	cagtgtgatg	gatatctgca	60
gaattcgccc	ttcccatgta	tttctcttta	ctgggctttc	ctgggtctca	aactcttcag	120
ctctctctct	ttatgctttt	tctgggtgatg	tacatctcca	cagttagnng	taatggggct	180
atcttgatgn	tggtgagcac	cncccatcag	ttgcataccc	ccatgtactt	ctttctgagc	240
aaccnntccn	tcctggagan	tttgggnatac	cacacgcaan	nagnngccna	aggcacttgg	300
nentnctaca	ggnggagaag	gcttgaccat	annattttac	catgcctngc	cttangncan	360
accenncttn	tncctnttnt	tcnctnnnn	ggtnnntcan	ccgcannctt	nnatcnnttg	420
nancttcatt	gaatatggnn	tnngtntntc	ttgagagcct	cnngatcnna	ttttttccan	480
cnntctaaag	ggngcttntc	tctctnnnat	ctagcttntt	ggntctcttt	tnntntctna	540
ccgtgntnt	cctatntgnt	gtctcttctc	acnnnctgen	nttatnttan	atcanntctn	600
nenttgctct	cntntacnac	atnatcatnc	tcnctcccn	ctntcnctct	ctatnnenta	660
ccatcnctct	cttctcatte	anctctttnt	cattgnttgt	tcanttannc	actctccntc	720
ncatcttcta	tncactannt	ttnttntttt	netctctant	tctnnttcca	ntgtncactc	780
cnntcttnnc	nnttncccta	ncg				803

<210> 28

<211> 620

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 3, 4, 7, 9, 10, 11, 24, 563

<223> N can be any nucleotide

<400> 28

gtnnttnann	ncattgcccc	tctngatgca	tgctcgagcg	gccgccagtg	tgatggatat	60
ctgcagaatt	cgcccttctc	atgtacttcc	tcttaccggg	ctttcctggg	tctcaaactc	120
ttcagctctc	tctctttatg	ctttttctgg	tgatgtacat	cctcacggtt	agtggtaagt	180
tggctatctt	gatgttgggt	agcacctccc	atcagttgca	tacccccatg	tacttctttc	240
tgagcaacct	ctccttctcg	gagatttggg	ataccacagc	agcagtgccc	aaagcactgg	300
ccatcctact	ggggagaagt	cagaccatat	catttacaag	ctgtcttttg	cagatgtact	360
ttgttttctc	attaggtgct	acagagtact	tcctcctggc	agccatggct	tatgaccgct	420
gtcttgccat	ctgctatctc	ttacactacg	gagccatcat	gagtagcctg	ctctcagcgc	480
agctggccct	gggcttctgg	gtgggtgggt	ttcggggcca	ttgcaagtgc	ccacagccct	540

tatcaagtgg cctgtccttc tgnngccccc gggcccatca accacttttt tctggggaca 600
attgcaccct ggaatggccc 620

<210> 29
<211> 620
<212> DNA
<213> Homo Sapien

<220>
<221> variation
<222> 3-5, 7-9, 15, 567, 574, 585, 596, 606, 611-612, 616, 618-619
<223> N can be any nucleotide
<400> 29

gtnnntnnnt	ccatnccatt	gggccctcta	gatgcatgct	cgagcggccg	ccagtgtgat	60
ggatatctgc	agaattcgcc	ctttcatggg	tccggaaaca	gtaaattatg	gggttcagtc	120
atggtaacag	gaggaggctg	agtgtatggg	catggatggg	ggctgtgaat	gtggcgggag	180
ctcatggatg	tgctcttctg	agtgtctcac	gtttctgagt	gaaataagaa	gcaaggctcat	240
caccgagagg	gaggagacag	gctcgggtga	gtttagtggg	tatgaatcca	agagagacca	300
ttcaacttag	ttgtctatct	ttttttcttc	cagttatagt	cacttgcacg	aatgtagatg	360
tggagtactt	gatcataaga	tccatcttat	ggcagaagac	attatcttct	tgagccttct	420
gctgtcagtt	tctaaataag	caggccagcc	gggtgtgca	cctaaatgtc	tgtctgggag	480
gagcaggctg	agaagtcttg	cagtctgcag	gacacccgag	gaatcgtatt	gtgggaaccg	540
tccccgagaa	ccacacgagc	cgtgctnctc	agtnctgact	ggaanaatga	aattgnaagc	600
caagtngttc	nnggancnnt					620

<210> 30
<211> 616
<212> DNA
<213> Homo Sapien

<220>
<221> variation
<222> 2-4, 7, 9-10, 580
<223> N can be any nucleotide

gnnnntnnnn	ccattgcgcc	ctctagatgc	atgctcgagc	ggccgccagt	gtgatggata	60
tctgcagaat	tcgcccttcc	tatgtatttc	tcttcctaac	gattggaatg	cctgggatta	120
ggcagatgat	tttctttttc	ccccataccc	ctctattatt	taggtgattg	agtttaaatc	180
ccttttatcta	cacccttcgg	aacaagggcg	aattccagca	cactggcggc	cgttactagt	240
ggatccgagc	tcggtacca	gcttgatgca	tagcttgagt	attctaacgc	gtcacctaaa	300
tagcttggcg	taatcatggg	catagctgtt	tcctgtgtga	aattgttatc	cgctcacaat	360
tccacacaac	atacgagccg	gaagcataaa	gtgtaaagcc	tgggggtgcct	aatgagttag	420
ctaactcaca	ttaattgcgt	tgcgtcact	gcccgttttc	cagtcgggaa	acctgtcgtg	480
ccagctgcat	taatgaatcg	gccaacgcgc	ggggagaggc	ggtttgcgta	ttgggcgctc	540
ttccgcttcc	tcgctcactg	actcgctggg	cttcggtcgn	tcggctgcgg	cgagcgggat	600
cagctcactc	aaaagg					616

<210> 31
<211> 612
<212> DNA
<213> Homo Sapien

<220>
<221> variation
<222> 2-9, 13, 507, 554, 585, 598, 600, 609
<223> N can be any nucleotide

gnnnnnnnnt	cangccattg	ggccctctag	atgcatgctc	gagcggccgc	cagtgtgatg	60
gatattctgca	gaattcgccc	ttcctatgta	tttctcttca	ctttctccga	catcactcac	120

agccacccca	ccctcagcct	ctccctcttc	ccatgtatatt	tctcttcaat	ctctccttct	180
ttgatatacct	gaactttctg	tagctcttta	ttttctcttc	caatcccttc	atatacacgt	240
ttcgtaacaa	gggcgaattc	cagcacactg	gcggccgtta	ctagtggatc	cgagctcggg	300
accaagcttg	atgcatagct	tgagtattct	aacgcgtcac	ctaaatagct	tggcgtaatc	360
atgggtcatag	ctgtttcctg	tgtgaaattg	ttatccgctc	acaattccac	acaacatacg	420
agccggaagc	ataaagtgtg	aagcctgggg	tgccctaata	gtgagctaac	tcacattaat	480
tgcgtgcgct	cactggccgc	tttccangtc	gggaaacctg	tcggccagct	gcattaaatg	540
aatcggccaa	cgcnccggga	gaggcggttt	gcgtattggg	cgctntttcg	ttcttcgntn	600
actgatcgnt	gg					612

<210> 32

<211> 616

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2-9, 15, 521, 596

<223> N can be any nucleotide

<400> 32

gnnnnnnnnnt	tcatnccatt	gggcccctcta	gatgcatgct	cgagcgggccc	ccagtgtgat	60
ggatatctgc	agaattcggc	cttggtgctt	agagtgtaaa	taaaagggtt	aacattgggt	120
tagaggtgaa	gagtaaatac	ataggaaggg	cgaattccag	cacactggcg	gccgttacta	180
gtggatccga	gctcgggtacc	aagcttgatg	catagcttga	gtattctaac	gcgtcaccta	240
aatagcttgg	cgtaatcatg	gtcatagctg	tttctgtgtg	gaaattgtta	tccgctcaca	300
attccacaca	acatacggagc	cggaagcata	aagtgtaaa	cctgggggtgc	ctaattgagt	360
agctaactca	cattaattgc	gttgcgctca	ctgcccgcct	tccagtcggg	aaacctgtcg	420
tgccagctgc	attaatgaat	cggccaaacgc	gcggggagag	gcggtttgcg	tattgggccc	480
tcttcgcgtt	cctcgctcac	tgactcgctg	cgctcggtcg	ntcggctgcg	gcgagcggta	540
tcaagctcac	tcaaaggcgg	taatacgggt	atccacagaa	tcagggggat	acgcangaaa	600
gaacatgtga	gcaaat					616

<210> 33

<211> 621

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2, 4, 6, 8, 19, 27, 31, 464, 526, 554, 578, 598, 600, 615

<223> N can be any nucleotide

<400> 33

gntntnanc	atgccccnc	cgatgcntgc	ncgagcggcc	gccagtgtga	tggatatctg	60
cagaattcgc	ccttggtgcg	gagcgaatat	atgaaggggt	taagggaaga	gaaaatacat	120
aggaagggcg	aattccagca	cactggcgcc	cgttactagt	ggatccgagc	tcggtaccaa	180
gcttgatgca	tagcttgagt	attctaacgc	gtcacctaaa	tagcttggcg	taatcatggt	240
catagctggt	tcctgtgtga	aattgttata	cgctcacaat	tccacacaac	atacagagccg	300
gaagcataaa	gtgtaaagcc	tggggtgcct	aatgagttag	ctaactcaca	ttaattgcgt	360
tgcgctcact	gcccgctttc	cagtcgggaa	acctgtcggtg	ccagctgcat	taatgaatcg	420
gccaacgcgc	cggggagagg	cggtttgcgt	attgggcgct	cttncgcttc	ctcgctcact	480
gactcgcttg	cgctcggtcc	gttcggctgc	ggcgagcggt	atcaantcac	tcaaaaggcg	540
ggaatacggg	tttncacaga	aatcaggggg	ataacgcngg	aaagaacatg	tgagccanan	600
ggcagcaaaa	gggcnaggaa	t				621

<210> 34

<211> 614

<212> DNA

<213> Homo Sapien

<220>
 <221> variation
 <222> 2-9, 13-14, 593
 <223> N can be any nucleotide

<400> 34
 gnnnnnnnnnt canncattg ggccctctag atgcatgctc gagcggccgc cagtgtgatg 60
 gatattctgca gaattcgccc ttgttccgaa ggctatagat gaaggggttt taggttttta 120
 ggaacacagg ctaaggggga agagaaaata catgggaagg gcgaattcca gcacactggc 180
 ggccgttact agtggatccg agctcggtag caagcttgat gcatagcttg agtattctaa 240
 cgcgtcacct aaatagcttg gcgtaatcat ggtcatagct gtttccctgtg tgaaattgtt 300
 atccgctcac aattccacac aacatacgag ccggaagcat aaagtgtaaa gcctgggggtg 360
 cctaattgagt gagctaactc acattaattg cgttgcgctc actgcccgtt ttccagtcgg 420
 gaaacctgtc gtgccagctg cattaatgaa tcggccaacg cgcggggaga ggcggtttgc 480
 gtattgggag ctcttcgctc tcctcgtcga ctgactcgct gcgctcggtc gtcggctgcg 540
 gcgagcggtg tcagctcact caaaggcggt aatacgggta tccacagaat canggggataa 600
 cgcaggaaaa gaca 614

<210> 35
 <211> 614
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 3-4, 7, 9, 23, 599, 611
 <223> N can be any nucleotide

<400> 35
 ggnnttnant cattgccccg ctngatgcat gctcgagcgg ccgccagtgt gatggatata 60
 tgcagaattc gcccttccga tgtattttct tctacgttaa ggtattttta attgttacta 120
 atgcataagg gcaacacatt ctgtaatgct gacaagatga aagagccaaa agtaattaat 180
 gatgctgtta cctcacaaat atgtatgtgt ggatgtatat atatctattc aatatatgta 240
 actatacata tgtctgtttc taattgaaaa caccaggtaa ttatcatctg tagaaaccct 300
 agtgtctcag ataagttggc tagttttttg tttcacataa aggaacaaac atttatagat 360
 ttatatgtat attaaaaatg gtaaaaattg gctgggtgca gtgggttcag cctataatac 420
 cagcactttg ggaagccgag gtgggaggat tacttgaggt aaggagccca gcctgaccaa 480
 caaggtgaaa ccccatccct actaaaaata caagaattag cccgggggat gtgggtggcca 540
 cctgtaatcc cagctacttg ggagactgaa gccaggaaaa tcacttgacc caggaagcng 600
 aggttgacag ngag 614

<210> 36
 <211> 611
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 1, 3-5, 10, 18-20, 22, 26, 605
 <223> N can be any nucleotide

<400> 36
 ngnnnttgan tcaattcnnn gncgangcat gctcgagcgg ccgccagtgt gatggatata 60
 tgcagaattc gcccttccga tgtatttctt tctagccaac ctcccactca ttgatctgtc 120
 tctgtcttca gtcataggcc ccaagatgat tactgacttt ttcagccagc gcaaagtcac 180
 ctctttcaag ggctgccttg ttcagatatt tctccttcac ttctttgggtg ggagtgagat 240
 ggtgatcctc atagccatgg gctttgacag atatatagca atatgcaaac ccctacacta 300
 cactacaatt atgtgtggca acgcatgtgt cggcattatg gctgtcgcat ggggaattgg 360
 ctttctccat tcgggtgagc agttggcctt tgccgtgcac ttacccttct gtgggtcccaa 420
 tgaggtcgat agtttttatt gtgaccttc tagggtaacc aaacttgccct gtacagatac 480
 ctacaggcta gatattatgg tcattgctaa cagtgggtgt ctcactgtgt ggtcttttgt 540

cttctaataca tctcatacac tatcatacta atgaccatcc agcattgccc tttagataag 600
tcgtncaaag g 611

<210> 37
<211> 616
<212> DNA
<213> Homo Sapien

<220>
<221> variation
<222> 2-4, 6, 8, 12-14, 17, 19-20, 442, 595, 599
<223> N can be any nucleotide

<400> 37
gnnntnanc cnnncnncnn ctagatgcat gctcgagcgg ccgccagtgt gatggatatac 60
tgcagaattc gcccttccca tgtatttgct tctcagcaac ttgtccttct ctgacctctg 120
cttctcttcc gtgaccattc ccaagttggt acagaacatg cagaaccagg acccatccat 180
cccctatgcg gactgcctga cccaaatgta cttcttccctg ttatttggag acctggagaa 240
cttctctctt gtggccatgg cctatgaccg ctatgtggcc atctgcttcc ccctgcacta 300
caccgccatc atgagcccca tgctctgtct cgccctgggt gcgctgtcct ggggtgctgac 360
caccttccat gccatgttac acactttact catggccagg ttgtgttttt gtgcagacaa 420
tgtgatcccc caactttttct gngatatgtc tgctctgctg aagcaggcct tctctgacac 480
tcgagttaat gaatgggtga tatttatcat gggagggtc attcttgtca tcccattcct 540
actcattctt gggtcctatg caagaattgt ctctcatcc tcaagggtccc tttntaang 600
gtatctgcaa ggccct 616

<210> 38
<211> 615
<212> DNA
<213> Homo Sapien

<220>
<221> variation
<222> 1, 3-6, 9, 11, 14, 16, 20, 21, 23, 540, 566
<223> N can be any nucleotide

<400> 38
ngnnnttna ntcnangccn ngngccctct agatgcatgc tcgagcggcc gccagtgtga 60
tggatatctg cagaattcgc ccttccaatg tatttacttc tcagccagct ctcccttatg 120
gacctgatgt acatctccac caccgtcccc aagatggcgt acaacttctt gtccggccag 180
aaaggcatct ctttccctgg atgtggtgtg caaagcttct tcttccctgac catggcgtgt 240
tctgaaggct tactcctgac ctccatggcc tacgaccgtt atttggccat ctgccactct 300
ctctattatc ctatccgcat gagtaaaatg atgtgtgtga agatgattgg aggtctcttg 360
acactggggt ccatcaactc cttggcacac acagtctttg cccttcatat tccctactgc 420
aggtctaggg ctattgacca tttcttctgc gatgtcccag ccattgttgc tcttgctgta 480
cagatacttg ggtctatgaa tatatggttt ttgtaaggac aaagcctctt tcttcttttn 540
cctttcattg gcatcacttc ttctgngggc cgagtccata ttgctggcta tataatgcac 600
tcaaaggagg ggagg 615

<210> 39
<211> 615
<212> DNA
<213> Homo Sapien

<220>
<221> variation
<222> 4-8, 12-13, 17-18, 22-23, 26-28, 469, 591, 596
<223> N can be any nucleotide

<400> 39
tagnnnnntt anntcanngc cnntgnnngc tcagatgcat gctcgagcgg ccgccagtgt 60

gatggatata	tgcagaattc	gcccttccaa	tgtattttct	tctcagcagg	agagatattt	120
atcctcaactg	ccatgtccta	tgaccgctat	gtagccatct	gctgtccctt	gaactacgag	180
gctgcacaga	gtacttcttc	ctggcagcca	tggcttatga	ccgctgtctt	gccatctgct	240
atcctttaca	ctacggagcc	atcatgagta	gcctgtcttc	agcgcagctg	gccctgggct	300
cctgggtctg	tggtttcgtg	gccattgcag	tggccacagc	cctcatcagt	ggcctgtcct	360
tctgtggccc	ccgtgccatc	aaccactttc	tctgtgacat	tgcacpctgg	attgccctgg	420
cctgcaccaa	cacacaggca	gtagagcttg	tggcctttgt	gattgtcgtnt	gtggttatcc	480
tgagttcatg	cctcatcacc	cttgtctcct	atgtgtacat	catcagcacc	atccttagga	540
tccctctgc	agtggccgga	gcaaagcctt	ctcccgtgct	cctcgcacat	naacngngtg	600
ctcatttggg	atggg					615

<210> 40
 <211> 586
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 14, 21, 23, 479, 498, 534, 584
 <223> N can be any nucleotide

<400> 40	
catgctcgag	cggncgccag ngngatggat atctgcagaa ttcgcccttc ctatgtattt 60
gcttctcagc	aggagagata tttatcctca ctgccatgtc ctatgaccgc tatgtagcca 120
tctgctgtcc	cctgaactac gaggtgattc atgtgcccac tagagcttga gaagcactgc 180
ttggaagccc	cttctgccat caatgaggct gcacagagta ctctctcctg gcagccatgg 240
cttatgaccg	ctgccttgcc atctgctatc ctttacacta cggagccatc atgagtagcc 300
tgctctcagc	gcagctggcc ctgggctcct ggggtctgtgg tttcgtggcc attgcagtgc 360
ccacagccct	catcagtggc ctgtccttct gtggcccccg tgccatcaac cacttcttct 420
gtgacattgc	accctggatt gccctggcct gcaccaacac acaggcagta gaagcttgng 480
gcctttgtga	attgctgntg tgggtatccc gagttcatgc ctcatcacc ttgncttcta 540
tgtgtacatc	atcaggcacc attctcagga tcccttctgc aagngg 586

<210> 41
 <211> 857
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 5-12, 16-18, 22, 27, 32, 42, 60, 99, 159, 171, 202, 212, 240, 242, 251, 306, 330, 371, 568, 669, 750, 802, 840, 856
 <223> N can be any nucleotide

<400> 41		
atggnnnnnn	nnntnnnaa anttttnccc antttgggcc gncccccct tctttaaggn 60	
aatgggcccc	ttgggccctt cccggaaggg ccgggggnc cgggccccaa aggtttgggt 120	
tgggaaatgg	ggggaattta aattcctttg ggccaaggna aaaattttcc ngccccctt 180	
tttttcccc	tttggttttt anccggggga anggggggt tgattaatta atcggaagn 240	
tnggggggaa	nttttttaaa aaaaaccttg ggggaaggtt ccaacccaac aaggttggtt 300	
ttccanggga	ccgttgggac caggcttttn gaatcaagaa tcccaaaggg cattcttttg 360	
gattaaggaa	nggtgccggg accggtgaaa gggaaaaaac tgggtggacc cataccaaaa 420	
tgagaaccac	ggtgagatgc cgaggagcac gtggagaaag gctttgcttc cggccactgg 480	
cagaggggat	cctgaggatg gtgcttgatg atgtacacat agggagacaa ggggtgatgag 540	
gcatagaact	aggataacca caacagcnat caciaaggcc acaaagctct actgcctgtg 600	
tgttgggtgc	aggccagggc aatccagggg tgcaatgtca caagaaagaa agtggttgat 660	
ggcacgggng	ggccacagaa ggacaggcca cttgatgaag ggcttgtggg cactgcaatg 720	
gccacgaaac	caccagaccc aggaaccan ggccaagctt gcgcctgaag agcaaggcta 780	
ctcatgaatg	gcttccttag tngtaaagga tagcaagatg gcaaaggcaa gccggtcatn 840	
aagccatggc	ttgcng	857

<210> 42

<211> 620
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2-4, 8-10, 43, 611, 613
 <223> N can be any nucleotide

<400> 42
 gnnnttannn cattgcgccc tctagatgca tgctcgagcg gcncgccagt gtgatggata 60
 tctgcagaat tcgcccttgt tgcgcaagga gtagatgaac ggattcaggg caaggggagtg 120
 ctgaggagat agacgggtat acactgggca caagtccatg agtaatcaag gcctgttatt 180
 taaaaaaaaa aaaaaaaaaaag cttgaacaat atagaatccc attaccaga gatagactgg 240
 atggtgaatt aaactttctg gtgaatttct ttccagatat ctctctatgc atatgtatac 300
 acaagcaatt tttggaagaa aagatacttt ataaggataa gcctgaaaac tgcaacgaat 360
 gcaatgtgga gaatgaaggc aagatgtggc gaagaagggc accacaatct ggtggctgag 420
 agagtgaac tgtcactaca gctaaaagga gagctggaga agctggtgag gacagtaaga 480
 gatgaatctg gtttaagaca cgctgagctc caaatgccat ggctccccta ggttgacctc 540
 tcagatgtaa atcttaagct caaagcaggt ggatgagaaa tcacatttca tagtccctgc 600
 acagacggct ntnttgagct 620

<210> 43
 <211> 608
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2-5, 10, 22-24, 27, 592
 <223> N can be any nucleotide

<400> 43
 gnnnttaan tcattgcccc gnnngangca tgctcgagcg gccgccagtg tgatggatat 60
 ctgcagaatt cgcccttccc atgtatttgc ttctcagcaa cttgtccttc tctgacctct 120
 gcttctcttc cgtgaccatt cccaagtgt tacagaacat gcagaaccag gacctgga 180
 tcccctatgc ggactgctg acccaaattg acttcttctt gttatttga gacctggaga 240
 gcttctcttc tgtggccatg gcctatgacc gctatgtggc catctgcttc cccctgcact 300
 acaccgccat catgagcccc atgctctgtc tcgccctggg gccgctgtcc tgggtgctga 360
 ccaccttcca tgccatgtta cacactttac tcatggccag gttgtgtttt tgtgcagaca 420
 atgtgatccc ccaacttttct tgtgatatgt ctgctctgct gaagctggcc ttctctgaca 480
 ctcgagttaa tgaatgggtg atatttatca tgggagggtc cattcttgca tccattccta 540
 ctcatccttg ggtcctatgc aagaaatgct cctcatcttc aaggcccttc tntaagggtg 600
 tctgcaag 608

<210> 44
 <211> 608
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2-5, 7, 9, 12, 20, 24, 26, 29, 31-32, 480, 530, 557, 579
 <223> N can be any nucleotide

<400> 44
 gnnntnant cntgccctgn ccncngcnc nngcgccgcg gcggatggat atctgcagaa 60
 ttgcgccctg ttactaagag tatagatgaa cggattcagg gcaagggagt gctgaggaga 120
 tagacgggta tacactgggc acaagtccat gagtaatcaa ggctgttat taaaaaaaaa 180
 aaaaaaagct tgaacaatat agaatcccat taccagaga tagactggat ggtgaattaa 240
 actttctggt gaatttcttt ccagatatct ctctatgcat gtgtatacac aagcaatttt 300

tggaagaaaa	gatactttat	aaggataagc	ctgaaaactg	caacgaatgc	aatgtggaga	360
atgaaggcaa	gatgtggcga	agaagggcac	cacaatctgg	tggctgagag	agtgcaactg	420
tcactacagc	taaaaggaga	gctggagaag	ctggtgagga	cagtaagaga	tgaatctggn	480
ttaagacacg	ctgagtctca	gatgccatgg	cttccttagg	ttgcctcttn	cagatgtaaa	540
tcttaagctc	aaagcangtg	gatgagaaat	acacatttna	tagtcacctg	cacagacggt	600
tttttgat						608

<210> 45

<211> 602

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 14, 16, 19, 21, 23-24, 27, 38, 40, 50, 52, 520, 551

<223> N can be any nucleotide

<400> 45

catgccccgt	ccncnagnt	ncnngcnccg	cggccgcnan	ggatatctgn	anaattcgcc	60
cttcctatgt	atttacttct	ccaacttctc	cttcccatct	ctatcattag	aaccattca	120
tataaccct	acgaaacaag	ggcgaattcc	agcacactgg	cggccgttac	tagtggatcc	180
gagctcggta	ccaagcttga	tgcataagctt	gagtattcta	acgcgtcacc	taaatagctt	240
ggcgtaatca	tggatcatagc	tgtttcctgt	gtgaaattgt	tatccgctca	caattccaca	300
caacatacga	gccggaagca	taaagtgtaa	agcctggggg	gcctaataag	tgagctaact	360
cacattaatt	gcgttgcgct	cactgcccgc	tttccagtcg	ggaaacctgt	cgtgccagct	420
gcattaatga	atcgggccaac	gcgcggggag	aggcggtttg	cgtattgggc	gctcttcgcg	480
ttctcgctca	ctgactcgct	gcgctcggtc	gttcggctgn	ggcgagcggt	atcagctcac	540
tcaaaggcgg	naatacggtt	atccacaaga	atcaggggga	taacgcaaga	aaagacatgt	600
ga						602

<210> 46

<211> 620

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2-4, 6, 10

<223> N can be any nucleotide

<400> 46

gnnnnatttn	attgcattgg	gccctctaga	tgcattgctg	agcggccgcc	agtgtgatgg	60
atatctgcag	aattcgccct	tagtgagtag	atgaaagggt	tcagcatggg	ggtcaccaca	120
gtgtacatca	tagccatgac	agtgtccttt	agagtagaac	tattagctga	tgagcataag	180
tagagaccaa	taacggttcc	atagaacagt	gacaccacag	ataggtggga	gccacaagta	240
gagaaggcct	tgcagacacc	cttagaagaa	gggaccttga	ggatggagga	gacaattctt	300
gcataggacc	caaggatgag	taggaatggg	atgacaagaa	tgagccctcc	catgataaac	360
atcaccatt	cattaactcg	agtgtcagag	aaggccagct	tcagcagagc	agacatatca	420
cagaaaagg	gggggatcac	attgtctgca	caaaaacaca	acctggccat	gagtaaagtg	480
tgtaacatgg	catggaaggt	ggtcagcacc	caggacagcg	ccaccagggc	gagacagagc	540
atggggctca	tgagggcggt	gtagtgcagg	gggaagcaga	tggccacata	gcggtcatag	600
gccatggcca	caaggaggaa					620

<210> 47

<211> 607

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2, 572, 578, 594

<223> N can be any nucleotide

<400> 47

cnatgggccc	tctagatgca	tgctcgagcg	gccgccagtg	tgatggatat	ctgcagaatt	60
cgcccttcca	atgtatttgc	ttctcagcaa	cttgctcttc	tctgacctct	gcttctcttc	120
cgtgaccatt	cccaagttgt	tacagaacat	gcagaaccag	gacccatcca	tcccctatgc	180
ggactgcctg	acccaaatgt	acttcttcct	gttatttgga	gacctggaga	gcttctctct	240
tgtggccatg	gcctatgacc	gctatgtggc	catctgcttc	cccctgcact	acaccgccat	300
catgagcccc	atgctctgtc	tcgccctggg	ggcgctgtcc	tgggtgctga	ccaccttcca	360
tgccatgtta	cacactttac	tcattggccag	gttggtgttt	tgtgcagaca	atgtgatccc	420
ccactttttc	tgtgatttgc	ctgctctgct	gaagctggcc	ttccctgaca	ctcgaattaa	480
tgaatgggtg	atattttatc	tgggagggct	cattcttgtc	atcccatccc	tactcaatcc	540
ttgggtctat	gcaagaaatt	gtcttcttca	tnctcaangg	ccctttcttc	taanggtatc	600
ttgcaag						607

<210> 48

<211> 613

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2-4, 7, 9, 257, 266, 295, 313, 322, 331, 334, 338, 340, 345, 348, 356, 358, 365, 378, 397, 398, 402, 410, 447, 480, 536-537, 557, 563, 576, 580, 584-586, 606, 610-612

<223> N can be any nucleotide

<400> 48

annncntng	gagctccaaa	gcagtggtaa	caacgcagag	tacgccccct	atgtacttac	60
tttggttaag	tccaacctcc	atcctccttg	gccttttgat	tcaattgac	actccttcct	120
cctcaaaaaca	ccttggtcac	tcactcttcc	tcagtctcct	ttgtggattc	ttcctcattt	180
atttgacctc	ttgctgggtga	accctttcat	atacactctc	cgtaacaaaag	agggcgctact	240
tctgtcgtct	tgagcgnact	gatggnaccc	agcttttggt	cccttttagtg	agggntaatt	300
gcgcgcttgg	cgnaatcatg	gncatagctg	nttncctgngn	gaaantgnta	tttcgntnac	360
aattncacac	aacatacnag	ccggggagcat	aaaggggnnaa	gncctgggggn	gcctaattgag	420
ggagcttact	cacaataatt	gggggtgngcc	cactggcccc	ttttcaggcg	ggaaaacctn	480
gcggggccag	ctggaataaaa	tgaatcgggc	cacgcgcgcg	ggaggagggc	gggttnngga	540
attgggcgct	tttccnttt	ctnggttaat	ggactnggtn	ggcnngtcc	gttcggttgg	600
ggggancggn	nnt					613

<210> 49

<211> 593

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 177, 298, 506, 515, 578, 582

<223> N can be any nucleotide

<400> 49

aacgcagagt	accgcccact	acgtaatctg	tacatgaaag	ggtttaaaag	agactgggaa	60
gagaggaatt	ggcaagatca	agcagaggca	actccttcta	gtccttctag	taccgcaagg	120
ggcagataaa	tggaaatggg	aacacctaga	ggaaagtata	cttgccaaaa	gcaaatncat	180
aggggggag	acattatcgg	gttgaaaaaa	gtattccatg	cagataaaaa	ccaaaagcaa	240
atacatcggt	ggcgacttcc	tgtcgtcttt	gagcgacttg	atggtaccca	gcttttgntc	300
ctttagttag	gggttaattgc	gcgcttggcg	taatcatggg	catagctggg	ttctgtgtga	360
aattgttata	ccgctcacaa	ttcacacaa	atacgagccc	gggagcataa	agtgtaaagc	420
ctgggggtgc	taatgagtgg	agcttactta	cattaaattg	cgttgcgctc	actggccgct	480
tttccaagtc	gggaaacctg	tcgtgncagc	ttcantaatg	aatcggccaa	cgccgcgggg	540
agaggcggtg	tgcgtattgg	gcgctcttcc	gcttcttngt	tnactgactt	cgg	593

<210> 50
 <211> 624
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2-4, 11, 16, 20, 22
 <223> N can be any nucleotide

<400> 50
 gnnntttaac nccgngnctn cnagcagtgg aacaacgcag agtacgcccc cgatgtactt 60
 tctttttcag tctcaagtct tctctttctc caaagatttt gtcttttcta ctacctgagc 120
 taccaaattcc cttgtcatca atttcaataa ctgtattctc ttcattcattt caacttcaaa 180
 cgtgtcatct cagaacaagc ttcattgttac ttccaatttt atccttcttg tttgttgatt 240
 ccaagaattc cagtcctatc taggcccgcg atgcattgtt cctgccaccc ttttcatatc 300
 ctcaattccc ttgtatcatc actttccttt tatatagcac agattccatg attcataaca 360
 ataattatgt ttttttttgc atgtgtctct aatttccctt cttgtctcta ttatcttcta 420
 tcatactttt ctggaaacac taattctggg gaaatatact ctttgtggac tttgcaactta 480
 tgctcagtca gctgaagatg atggctagac aaatactcac aatcatgctg actggcccaa 540
 tttatagtca tgaccaccga ttacaaaccc cttcatttat tctccgcaac aggggcgtct 600
 tctgcgcttg agcgtccggg gggg 624

<210> 51
 <211> 584
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 584
 <223> N can be any nucleotide

<400> 51
 gcagtggtaa caacgcagag tacgcccgtt acggaggctg taaataaagg ggttgaggaa 60
 gtaaagtact tcacagtact ggagcacaca gcatgtgaat ttcagccaaa ggacaaatgc 120
 ctccaaaaaa agttaattca cagtgcagca gggcgaggca cttgtcttat tcgctgggtc 180
 tcacattgac cctgaaagga cttttttttg ttaatcccat tttcacagat gggaaaggga 240
 ctctgtatgg ttgtcacttt tatccaaagt ctcatagcca gtaagaagct gccctcaaag 300
 tccctaccct gtcttccatt cgactattct gaggttcaga cccagaaaacc ccatacctct 360
 gccttatatt ttaatgaaaa gtatgtctcc aggtttatgt ggagaataac caagacctca 420
 gaaacattta gtgaaaatca gagctagaag gaatctgttt ttttgcgagt tcagagaaac 480
 tgacttggat aagacatcaa agttgtcttg tgcagcaaat tctcctccgg cacatagtag 540
 gcactctgat aaattcaaaa aggcttctaa gaagaggcag aagn 584

<210> 52
 <211> 613
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 6, 10-12, 16-17, 20, 553, 594, 607, 613
 <223> N can be any nucleotide

<400> 52
 gtgaanccan nntaannccn attggagctc caagcagtgg taacaacgca gagtacgccc 60
 ccatgtagt ttcttcttct cttctctccc tcttctcttc cttcttctct ttctctctct 120
 ctccctctcc ctctccctct cctctctctc ctctcttctt ttctctctcc tctctctccc 180
 cccaatccgt tcatgacttc ttcttctctc tcttctctct ctttcttctt ttcttctttt 240

tctctaagca	ggatcctggg	ctgttcaaac	cagagagctg	taagtctttt	ctttcccat	300
tactgttaga	tccgttgaat	cggctccaga	aaccaaaca	gttaaccctt	gcatttacac	360
gtttcgtaac	gggcgtactt	ctgtcgtctt	gagcgtactg	atggtagcca	gcttttggtc	420
cctttagtga	gggttaattg	cgcgcttggc	gtaatcatgg	tcatagctgt	ttcctgtggg	480
aaattgttat	ccgtccaca	ttccacaca	catacgagcc	gggagcataa	aagtgtaaag	540
cctgggtgc	ctnatgagtg	agctaactca	cattaattgc	gttgcgctta	ctgnccgttt	600
tcagtcngga	aan					613

<210> 53

<211> 611

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2, 4-5, 7-9, 14-15, 601

<223> N can be any nucleotide

<400> 53

tnanncnnt	taanncccat	tggagctcca	aagcagtggg	aacaacgcag	agtagcccc	60
cgatgtactt	gcttcttctt	ctttggagtg	gctgaatgct	tcttcttggc	taccatggca	120
tatgaccgct	atgtggccat	ctgcagctcc	ttgcactacc	cagtcacatc	gaaccaaagg	180
actcgtgcca	aactggctgc	tgcctcctgg	ttcccaggct	ttcctgtagc	tactgtgcag	240
accacatggc	tcttcagttt	tccattctgt	ggcaccaaca	aggtgaacca	cttcttctgt	300
gacagcccac	ctgtgctgag	gctggctctgt	gcagacacag	cactgtttga	gatctacgcc	360
atcgtcggaa	ccattctggt	ggtcatgata	ccctgcttgc	tgatcttgtg	ttcctatact	420
cgcattgctg	ctgccatcct	caagatccca	tcagctaaag	ggaagaataa	agccttttct	480
acatgttcct	cacacctcct	tgggtggctct	ctttctata	tatcattaag	cctcacctac	540
ttccggccta	aatcaaataa	ttcacctgag	ggcacgaagc	tgctatcatt	gcctacactg	600
ntatgactcc	a					611

<210> 54

<211> 606

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 4, 483, 509-510, 606

<223> N can be any nucleotide

<400> 54

gttnttccat	ggactcccaa	gcagtggtaa	caacgcagag	tacgccccct	atgtacttac	60
ttcttgctgg	cttatcattt	atagatatca	tttattcttc	atccatttcc	cacagatcga	120
tttcagactt	gttctttggg	aataattcca	tatccttccc	atcttgcttg	gccagctct	180
ttacagagcg	ccttttttgg	gggtcagagg	tctttcttct	gttggtgatg	gcctatgacc	240
ttgcattact	tggttatcat	gagacaatgg	gtgtgtgttt	tgctgctggg	agtgtcctgg	300
gttgaggat	ttctgcactc	agtatttcaa	cttagtggtt	tttatgggct	cccattctgt	360
gacctcaatg	tcattgatca	ttttttctgt	gatatgcacc	ctttattgaa	actggctctgt	420
accgataccc	atgttattgg	cctcttagtg	gtggcaatgg	aggactaggt	tgcaactattg	480
ggnttctgct	cttactcctc	tcttatggnn	catctgcact	ctctaaagaa	ccttagtcag	540
aaagggaggt	gaaaagccct	ctcaacctgc	agttccacat	aactgggggg	tggtttcttc	600
tttgn						606

<210> 55

<211> 630

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 4-5, 8-9, 12, 16, 19, 295, 298, 321, 472, 481, 573, 617

<223> N can be any nucleotide

<400> 55

ttannccnnt	tnaatnccnt	tggagctcca	aagcagtggg	aacaacgcag	agtacgcccc	60
caatgtactt	gcttcttctt	ttttggggct	gctgagtgtc	gcctcctggc	caccatggca	120
tatgaccgct	acgtggccat	ctgtgacccc	ttgcactacc	cagtcacat	gggccacata	180
tcctgtgccc	agctggcaag	ctgcctcttg	gttctcaggg	ttttcagtgg	ccactgtgca	240
aaccacatgg	attttcagtt	tccctttttg	tggccccaac	aggggtgaac	acttntntng	300
tgacagccct	cctgttattg	nactgggtct	tgctgacacc	tctgtgtttt	gaactggagg	360
ctcttgacag	ccactgccta	attcattctc	tttcttttct	tgctgaccc	gggatcttat	420
ttcgcatctt	cttcactatc	tttaaggatg	ccgtcagctg	aggggaaaca	tnagcattct	480
ncacctgttc	cgccacctc	ttgggtggct	ctctcttcta	tagcactggc	aatccttaac	540
gtattttccg	acccaattc	aagtgccttt	ttntgagaag	caaagaaact	ggttgtcact	600
tttttttcac	aaggggngac	ttccaatggt				630

<210> 56

<211> 631

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2, 4, 8-10, 493, 582

<223> N can be any nucleotide

<400> 56

gngnttttnn	ccatggagct	ccaaagcagt	ggtaacaacg	cagagtacgc	ccccatgta	60
ctttcttctt	ctttggagtg	gctgaatgct	tcctcctggc	taccatggca	tatgaccgct	120
atgtggccat	ctgcagtccc	ttgcactacc	cagtcacat	gaaccaaagg	actcgtgcca	180
aactggctgc	tacctcctgg	ttcccaggct	ttcctgtagc	tactgtgcag	accacatggc	240
tcttcagttt	tccattctgt	ggcaccaaca	aggtgaacca	cttcttctgt	gacagccccc	300
ctgtgctgag	gctggtctgt	gcagacacag	cactccttga	gatctacgcc	atcgtcggaa	360
ccattctggt	ggatcatgat	ccctgcttgc	tgatcttgtg	ttcctatact	cacattgctg	420
ctgccatcct	caagggtccc	tcagctaaag	ggaagaataa	agccttttct	acatgttctt	480
cacacctcct	tgntgtctct	cttttctata	tatcattaag	cctcacctac	ttccggccta	540
aatcaaataa	ttcacctgag	ggcaagaagc	tgctatcatt	gncctacact	gttatgactc	600
catgttgaac	cccataattt	attcattcag	c			631

<210> 57

<211> 637

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 5-6, 76, 82, 92, 106, 122, 125, 142-143, 190, 214, 223, 244, 247, 259, 283, 290, 320, 402, 416, 455, 470, 529, 558, 561, 607, 618, 620, 630

<223> N can be any nucleotide

<400> 57

ttatnnccat	tggagctcca	aagcagtggg	aacaaccgca	gagtacgccc	cccatgtatt	60
ttctttttct	tggggnagct	gnatgcttcc	tnctggctac	catggnatat	gaccggctat	120
gnggncatct	gcagtccctt	gnnctcccag	tcattatgaa	ccaaaggaca	cgggccaaac	180
tggctgggtgn	ttcctgggtc	ccaagctttc	ctgnagctac	tgngcaagac	cacaatggct	240
cttnagnntt	ccattctgng	gcaccaacaa	ggtgaaccac	ttntttctgn	gacagccggc	300
tgtgctgaaa	gctggtctgn	tgcaagacac	agcactgttt	gagatctacg	ccatcgtcgg	360
aaccattctg	gtgggtcaatg	aaccctgct	tgctgatctt	gngttcctat	actcgnattg	420
gtgctgctat	ccctcaagaa	cccataagc	taaangggaa	gcaataaagn	cctttctcta	480
cgtgctcctt	aacacctccc	ttggtggcct	ctcttttcta	atataatcnt	ctaagcctca	540
acctacttct	tgggcctnaa	ntcaaataaa	ttcttctgga	gaggcaagaa	ggtggtattc	600

atttatncta cactggtngn gactccatgn tggaact

637

<210> 58
 <211> 621
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 3, 6, 9, 16, 19, 507, 597, 611
 <223> N can be any nucleotide

<400> 58
 gtnatncnt ttaatncnt tggagctcca agcagtggta acaacgcaga gtacgcccgt 60
 tcctcagaca gtatatgaat gggttaaaaa tgggccagag cagatgcagg aagatcaaatt 120
 aggaggctac tgcagtagag tcaaactctag ggctgatggg ttcttgggat gcatagtaatt 180
 aggtagatag agaaagtctt taggaggttag aatggacagg acttcacaat gcattaaatg 240
 tagggagaaa aaaaatgatt cctgggtttc tagcttgagc tagtagggat agtggttagaa 300
 ttactgata tggaaaactg gaggaaaaag agtttggaag agaaagatgg caagttaaatt 360
 acctgtggga aatataatca cagacactaa ataggcagct gtgtgggtgg caaaggagag 420
 ccatgggcta ggaacatata gtgggattcc ctggcatgtc attgggttact gaagtcagag 480
 tgtatgagac agcctaagga gagaatncac acaggagaag aaagaactaa acattcagtg 540
 gctggccaga ggatgagaaa cccaagagat tggactgttt aggagcaaca gtgttgngaa 600
 aaggagaaa nggttgaaat t 621

<210> 59
 <211> 631
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 3, 8, 9, 11, 29
 <223> N can be any nucleotide

<400> 59
 ggnnttannc nctggagctc caaagcagng gtaacaacgc agagtacgcc cattgcgtag 60
 cgtgtacata aaggggttgg agctgaagga ggagataaag aagaagacag ccagaacctt 120
 gtccctctgtc ggagatcgca gggatcttgg gccgtagata ggtataagca aaggggtgcat 180
 agtagaaagt cactacagtg aggtgggtgc tgcaggtcga ataggccttc ttcctccctt 240
 ctgcagagtg catgtggttag acagcaagga gaatccggcc atagggaacat gcaatacaaa 300
 tgaagggaaa cacaagaaaa atgggtggtgc tcaaaaacac cgtgcactca tagaccagg 360
 tatccgtgca ggctagggtc aacatagctg gaacatcaca gaaaaaatga ttgatggctc 420
 tggacttgca atatgggata cggagtgcac ataccgtgtg agcacaagag ttgatggagc 480
 ctatcatcca agatcctgtt atcatcagtg cacacactct ttttctcata cggatgagat 540
 agtggagagg aaagcaata gccacataac gatcataggc cattgatgtc aggagcagcg 600
 cttctgcacc tgctaaagtc aggaagaaga t 631

<210> 60
 <211> 620
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 6, 10-11, 15, 18
 <223> N can be any nucleotide

<400> 60
 tgttantccn ntttncncc attggagctc ccaagcagtg gtaacaacgc agagtacgcc 60
 ctccctgttt ctgagagtgat agatgaaggg gttataggag ataaagatca gggcaatatg 120

taggacaagg	acacagacac	tgacaacaaa	gttgattatc	tcattgacag	tgggtgtctgt	180
gcaggccagc	ttcagcaggg	gtctcacatc	acagaagaag	tgggagatga	caaagtcac	240
acaaaagggc	aggccaaaca	tagatgttac	ttggacaata	gccatgcccc	ggccaatcct	300
cagtgaccca	gatcccagtc	agacacaagc	cctcttacct	atgaataccg	taaggggttg	360
cagaagacca	catagcaatc	atatcccatg	gctatgagaa	gaaagcagtt	gttgatgcca	420
aaagtcacat	agaagagctg	agtgcacacg	ccttgcatga	caataagcta	gtgaggattc	480
aagaggcgag	aaagcatatg	gggagtaatg	gccaccatgt	agcagggtctc	agagatagac	540
agcaatgctt	aggaaaaagt	acatggggccg	tacttctgtc	gtcttgagcg	tactgatggg	600
accagctttt	tgttcccttt					620

<210> 61
 <211> 612
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 3, 5-6, 9-10, 20, 25, 37-38
 <223> N can be any nucleotide

<400> 61	
gtnannccnn	tgtagctccn
cccgatgtac	ttgttcctac
ctatgaccgg	tttgtggcca
cctctgtgga	ctgctgggtc
aatcttaatg	gtagtacggc
tgaacttaat	caggtcatcc
atattttaca	gttgcgctgc
taagataatt	tcttccatac
acctgtgcat	ctcacctctc
cttagtctgc	tgccaccgcg
gggcaccccc	at
	60
aagcngagct	aacaacnnag
atttgaaaac	ttcctcctgt
cctgcactac	atggtcatta
gacctagagt	gctctgtatt
cacagcctta	gaaatccccc
ttctgatagc	tttcttaatc
tccccact	gggacccctt
gggaagtaca	aggcattttc
gtgcaatcct	aggggtgtac
agcctcagtg	atgtacactg
	120
atcagctcag	gggaagtaca
gtgcaatcct	aggggtgtac
agcctcagtg	atgtacactg
	180
gacctagagt	gctctgtatt
ccttgctaca	
	240
gacctagagt	gctctgtatt
ccttgctaca	
	300
gacctagagt	gctctgtatt
ccttgctaca	
	360
gacctagagt	gctctgtatt
ccttgctaca	
	420
gacctagagt	gctctgtatt
ccttgctaca	
	480
gacctagagt	gctctgtatt
ccttgctaca	
	540
gacctagagt	gctctgtatt
ccttgctaca	
	600
gacctagagt	gctctgtatt
ccttgctaca	
	612

<210> 62
 <211> 628
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2-8, 13, 19, 22, 32, 35-41, 49
 <223> N can be any nucleotide

<400> 62	
gnnnnnnnat	tnnatgccnt
agagtacgcc	ccctatgtat
cccaccacta	actaaagtag
tgttacaaac	ataacatcct
gggatctagg	aattcgtagg
tctaggcaac	aatgaattaa
gatcacaggg	aagagggtaa
aaagagaggt	gccaccctct
ctctgaggaa	caagggggcg
tgtcccttta	gtgaggggta
tgtgaaattg	ttatccgctc
	60
cnttnnnnnn	ncaagcagng
gatccaaata	ttaaaataaa
acttctctat	taagaagcat
caaagccact	caatcaaata
gccccaaaat	gattattacc
ctaccatttg	gtactggtag
ctagcagagc	tgccagaact
tgtaagtagc	aaacaaccct
gtcttgagcg	tactgatggg
atggtcatag	ctgtttcctg
	120
gacctagagt	gctctgtatt
ccttgctaca	
	180
gacctagagt	gctctgtatt
ccttgctaca	
	240
gacctagagt	gctctgtatt
ccttgctaca	
	300
gacctagagt	gctctgtatt
ccttgctaca	
	360
gacctagagt	gctctgtatt
ccttgctaca	
	420
gacctagagt	gctctgtatt
ccttgctaca	
	480
gacctagagt	gctctgtatt
ccttgctaca	
	540
gacctagagt	gctctgtatt
ccttgctaca	
	600
gacctagagt	gctctgtatt
ccttgctaca	
	628

<210> 63
 <211> 627
 <212> DNA
 <213> Homo Sapien

<220>

<221> variation

<222> 191, 214, 263, 271, 277, 303, 325, 333, 363, 418, 528, 570, 596, 614

<223> N can be any nucleotide

<400> 63

tgtagctcca aagcagtggg aacaacgcag agtacgccct cttgggttacg taagggaata	60
gatgatgggg ttcagcatgg ggggtgactac agtgtacatg acagtggcca cacggtccca	120
ctctgtctgc gtccggacgt ggcctggaag tagactgcaa tgactgtcct atagaaagag	180
gtcaccaca nccaggtggg agccacaggt gggncacaag tcccggagcc tcccagaggc	240
ttgagggcag ctggagcacg ggnaagcttg ntatgggnccc acaaggaggc gaggatgagc	300
agnaagggag tgaccaccac ttgcnegccc ctnggtgaag atgagcagct tggatgtggg	360
ggntgtcaga gcacgagagc ctttaagaga ggcttgggtg gtcacagaag aagtggngc	420
actttgtggg aaagcacaga aaggacaagc gagccatgag caggatatac aggagggagt	480
tgtccgtggg acaccagcca tgccattcca accagggctg cgcacatngc cggggacatt	540
ctcgtgggat aagggaaggg gtgccggatn ggcacgtatc agtcataggc cttggncgcc	600
agaagacagc tttnaattta ccccagg	627

<210> 64

<211> 605

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 5-6, 9, 11, 14, 17, 21-22

<223> N can be any nucleotide

<400> 64

gttanncnt ntanctncaa nngaggtaac aacgcagagt acgccccca tgtatttgct	60
tcttgccaa cctgtccttt gtagagatct gctacaccac cgttgtgggtg cccttgatgc	120
tttccaacat ttttggggcc cagaagccca ttccattggc tggatgtggg gcccaaagt	180
tcctctttct cacacttggg ggtgctgact gtttctctct ggcatcgtg gcctatgacc	240
gctatgtggc catctgccac cctttgcaat acccctcatc atgacctgca gtctgtgcgt	300
gcagatgctg ggcggcgctg tgggcctggc cctcttctct tccttgacgc tcaccgcctt	360
aatcttcacc ttgcccttct gcggctaccg ccaggaaatt aaccacttcc tctgcgatgt	420
acctccgtcc tgcgcctggc ctgcgctgca tccgtgttca ccaggctgcc tctatgtcgt	480
gagcatctc gtgctgaccg tccccttctt gctcatctgc gtctcctacg tgttcacac	540
ctgtgccatc ctgagcatcc gttctgctga gggccggcac caggcctttt caactgctct	600
tccgg	605

<210> 65

<211> 609

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 10, 14-15, 19, 22, 67, 603

<223> N can be any nucleotide

<400> 65

tgtagctccn aagnngagnt ancaacgcag agtacgcccg cggaatctat agatgaaagg	60
gtttggngag tcagaagaag gaagtacatg ggagtcataa cagtgtagga caatgatggc	120
agcttcttgc cctcaggtga attatttgat ttaggccgga agtaggtgag gcttaatgat	180
atatagaaaa gagagacaac aaggaggtgt gaggaacatg tagaaaaggc tttattcttc	240
cctttagctg atgggatctt gaggatggca gcagcaatgt gagtatagga acacaagatc	300
agcaagcggg ggatcatgac caccagaatg gttccgacga tggcgtagat ctcaaagagt	360
gctgtgtctg cacagaccag cctcagcaca ggtgggctgt cacagaagaa gtgggtcacc	420
ttgttgggtg cacagaatgg aaaactgaag agccatgtgg tctgcacagt agctacagga	480
aagcctggga accaggaggt agcagccagt ttggcacagag tccttttggtt catgatgact	540

gggtaagtgc aagggactgc agatggccac atagccggtc atatgccatt ggtagcccag 600
gangaagct 609

<210> 66
<211> 617
<212> DNA
<213> Homo Sapien

<220>
<221> variation
<222> 6, 20
<223> N can be any nucleotide

<400> 66
gttatncctt gttgctcccn agcagaggta acaacgcaga gtacgcccct atttctcaga 60
tatangatga aggggttcag aaaaagaatg agcaaagaaa atctgggcca ggcgggcatc 120
aaaagaaata gtcttgtgct caaccagaaa gtctgcaatc attttagggg tagcagaaga 180
ggcaacacat acgtctataa atgacagggt ggcaagaagc aaatacattg ggggcgtact 240
tctgtcgtct tgagcgtaact gatggtaccc agcttttgtt cccttttagtg agggttaatt 300
gcgcgcttgg cgtaatcatg gtcataagctg tttcctgtgt gaaattgtta tccgctcaca 360
attccacaca acatacgagc cgggagcata aagtgtaaag cctggggtgc ctaatgagtg 420
agctaactca cattaattgc gttgcgctca ctgcccgtt tcagtcggga aacctgtcgt 480
gccagctgca ttaatgaatc ggccaacgcg ccggggagag gcggtttgcg tattgggcgc 540
tcttcgcgtt ctcgctcact gactcgcttg cgctcggtcg ttcggcttgc ggcgagcggg 600
atcaagctca ctcaaat 617

<210> 67
<211> 621
<212> DNA
<213> Homo Sapien

<220>
<221> variation
<222> 10, 17, 28, 277, 286, 370, 373, 422, 513, 527, 536, 545, 548, 550, 558,
563, 566, 572, 574, 579, 583, 603-604, 609, 621
<223> N can be any nucleotide

<400> 67
gggttttact ctgtgcncct ccagcagnng taacaacgca gagtacgccc ttgttgcgaa 60
gaaataaatg aatgggttta aaatagacgt gaagatgggtg tagaatacag caaggacttt 120
gtcaactgag taactgctga agggccacac atagatgaaa atacacgac caaagaataa 180
agtgaccaca gtgatgtgag cagtcaatgt ggagtgggcc ttcaccatgc ttacagagga 240
gcgattccta actgtaataa gtattacagt gtagganaca accaanagga gaaaggaact 300
cagagaaaga aagccaccat ctgcaactat tagtaggctg acaacataag tgtctatgca 360
ggctaacttn gtngctagag gaagggtcaca gaaaaaaact atctacctta ttaggaccac 420
anaatggcag attaacctgt aatgccaaact ggctgggtgt atggatgaag cccacaaacc 480
aggaaatgag gacgagcaca acacatacac agnagctcat gattganatg tagtgnggag 540
gttttctnctn gctcatancc gtnttngcca tngnaactng gancaccatt ttacttgcag 600
tgnnggagng aacatgaaat n 621

<210> 68
<211> 611
<212> DNA
<213> Homo Sapien

<220>
<221> variation
<222> 5-6, 9-10, 17, 19, 298, 464, 519, 549
<223> N can be any nucleotide

<400> 68

gttannccnn	tttaatncna	tggagctcca	aagcagtggt	aacaacgcag	agtacgcccc	60
cgatgtactt	gttcctactc	tttgctggat	ttgaaaactt	cctcctgtcc	gtgatggcct	120
atgaccggtt	tgtggccatc	tgtcaccccc	tgcactacat	ggtcattatg	aaccctcacc	180
tctgtggact	gctggttcta	gcatectgga	ccatgagtgc	tctgtattcc	ttgctacaaa	240
tcttaatggt	agtacggctg	tcttctgcac	agccttagaa	atccccact	ttttctgnga	300
acttaatcag	gtcatccaac	ttgcttggtc	tgatagcttt	cttaatcaca	tggtgatata	360
ttttacagtt	gcgctgctgg	gtggagggtc	cctcactggg	atcctttact	cttactctaa	420
gataatttct	tccatacatg	caatctcatc	agcttagggg	aagnacaagg	cattttccac	480
ctgtgcatct	cacctttcag	ttgctcctta	ttttatggng	caatctaggg	gtgaccttag	540
ttttgctgnc	accgcgaact	cacacttaag	tgcaacaacc	tcagtgatgt	acactggggg	600
caccccatgc	c					611

<210> 69

<211> 625

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2, 4-6, 11, 15-16, 40, 42, 45, 47, 52, 61, 64-66, 74-75, 77, 80, 586, 618

<223> N can be any nucleotide

<400> 69

gngnnncgag	nttannccctt	ggactcccag	tagagctacn	angantncgc	cnagcgcgca	60
nttnnnccag	ggtnntnttn	gtatcaccaa	tgaatagaaa	acagacacca	ccttgteccct	120
gcctagcaag	tagctggagc	tgggtcgcaa	gtacacgaaa	agggctgtcc	caaacagcag	180
agtcaccacc	atcagatgcy	aggcacacgt	gttgccaggct	ttccatcggc	cctctgctga	240
agggatcttc	aggaccgcag	acactatgta	accataggag	ataaggaggt	ggaggaacga	300
tgttcctccg	acggtgacca	ccacgaggaa	ttaccact	tgactgagga	aggtgtcaga	360
gcaagacaga	gccaggactg	gtgggagggt	gcagaagaag	tggttgatga	tggtgggtcc	420
gcaaaagtga	agcctaaata	tggagctggc	ctggatcagg	gagctcagga	agccaccaac	480
atatgccccca	accaccatgc	gtgtacagag	gccctgggtc	atgatagtgg	ggtanagaag	540
ggggctggag	atggcttgca	tatcggtcgt	atgccatagc	agtcangagg	aggcactcaa	600
gacagaccca	tgccgacnaa	gaaat				625

<210> 70

<211> 626

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2-5, 17-18, 24, 34, 42, 584

<223> N can be any nucleotide

<400> 70

gnnnnntttta	ccccgnggc	acanagcagt	ggtnacaacg	cncgagtacg	ccccctatgt	60
attttttcct	attctggaca	cgctactcct	gaccgtgatg	gcctatgacc	ggtttgtggc	120
tgtctgccac	cctctgcact	atatgatcat	catgaacccc	cacctctgtg	gcctcctggg	180
ttttgtcacc	tggctcattg	gtgtcatgac	atccctctc	catatttctc	tgatgatgca	240
tctaattcttc	tgtaaagatt	ttgaaattcc	acattttttc	tgcgaaactga	cgtacatcct	300
ccagctggcc	tgtcttgata	ccttcttgaa	cagcacgttg	atatacttta	tgacgggtgt	360
gctgggcgtt	tttccccctc	ttgggatcat	tttctcttat	tcacgaattg	cttcacccat	420
aagggaagatg	tcctcatctg	ggggaaaaca	aatagcactt	tccacctgtg	gggtcacct	480
ctccgtcggt	tctttatatt	atgggacagg	cattgggggc	cacttcactt	ctgcggtgac	540
tcacccttcc	cagaaaatct	ccgtggcctc	ggtgatgtca	ctgnggtcac	ccccatggtg	600
accctttcat	ttacaccctt	agcaag				626

<210> 71

<211> 633
 <212> DNA
 <213> Homo Sapien

<220>

<221> variation

<222> 2-10, 4, 7, 10-11, 33, 35, 39, 50, 57, 60, 61-62, 65, 84-85, 441, 615, 617, 632

<223> N can be any nucleotide

<400> 71

gnnnnnnnnnn	gttnatnccn	nttttaatgc	cantngagnt	aacaacgcan	gagtacnccn	60
nngngtacgc	ccagggttca	accnntgaat	agaaaaacaga	caccaccttg	tccctgccta	120
gcaagtagct	ggagctgggt	cgcaagtaca	cgaaaagggc	tgtcccaaac	agcagagtca	180
ccaccatcag	atgcgaggca	cacgtgttgc	aggctttcca	tcgccctctg	ctgaagggat	240
cttcaggacc	gcagacacta	tgtaaccata	ggagataagg	agttggagga	acgatgttcc	300
tccgacgggt	accaccacga	ggaaattcac	cacttgactg	aggaaggtgt	cagagcaaga	360
cagagccagg	actggtgggg	aggttgcaag	aagaagtggg	tgatgattgt	tgggtcccgc	420
aaaagtgaag	gcctaaatat	ngagctggcc	tggatcaggg	gagctcagga	agccacaaca	480
tatgccccaa	ccaccatgcg	tgtacagagg	ccctgggtca	tgatagtggg	ggtnagagaag	540
ggggcctgga	gatggctgca	tatcggtcgt	tgccatagca	agtcaggagg	aggcacttca	600
gacagaccca	tgccncnaag	aaaaaaaaact	gnc			633

<210> 72
 <211> 614
 <212> DNA
 <213> Homo Sapien

<220>

<221> variation

<222> 2-11, 14-17, 19-20, 22, 28, 42-43, 45, 51, 76, 82-83, 85, 101, 106, 110, 112-114, 117, 119, 135, 139, 434, 507, 520, 614

<223> N can be any nucleotide

<400> 72

gnnnnnnnnnn	nttnnnnncnn	tnactccngc	agtggtaaca	annantacgc	ncagcgcgca	60
gttaaccctc	actaanggta	anntnagctg	gaacacatca	ntacgntcan	gnnngcncna	120
tgaccgggtt	gtggncatnt	gtcaccacct	gcactacatg	ggtcattatg	aaccctcacc	180
tctgtggact	gctggttcta	gcatectgga	ccatgagtgc	tctgtattcc	ttgctacaaa	240
tcttaatggg	agtacggctg	tccttctgca	cagccttaga	aatccccac	tttttctgtg	300
aacttaata	ggcatccaac	ttgcttggtc	tgatagcttt	cttaatcaca	tggtgatata	360
ttttacaggt	tgcgctgctg	gggtggaggc	ccctgactgg	gatcctttac	tcttactcta	420
aagataattt	cttncatata	tgcaatctca	tcagctcaag	gggaagtcaa	ggcatttttc	480
acctgtgcat	ctaccctcca	gttgctnctt	attttatggg	gcaatcctag	gggtgacctt	540
agttctgggt	gcacccgcaa	ctacactcaa	tgcaacaagt	cagtgatgta	cactgtggca	600
cccatgctga	accn					614

<210> 73
 <211> 630
 <212> DNA
 <213> Homo Sapien

<220>

<221> variation

<222> 3-6, 8-10, 17, 124, 144, 146, 173, 184, 193, 212, 220, 266, 274, 276, 288, 306, 419, 423, 448, 474, 485, 500, 552, 555, 576, 588, 591, 606

<223> N can be any nucleotide

<400> 73

gtnnnnnnnn	ttgattncca	ttggagctcc	aaagcagtgg	taacaacgca	gagtacgccc	60
cctatgtatt	ttttcctatt	ctggacacgc	tactcctgac	cgggatggcc	tatgaccggg	120


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ttgnggctgg ctgccaccct ctgnantata tgatcatcat gaacccccac ctntgtggcc 180
tccnggtttt tgnacacctg ctcattggtg tnatgacatn cctcctccat atttctctga 240
tgatgcatct aatcttctgt aaagantttg aaantncaca tttttttntg cgaactgacg 300
tacatnctcc agctggcctg ctctgatacc ttcctgaaca gcacgttgat atactttatg 360
acgggtgtgc tgggcgtttt tccctccttg ggatcatttt cttcttattc acgaattgnt 420
ttnatccata aggaagaatg tcctcatntg ggggaaaaca aataagcact tttncacctg 480
tgggnctcaa cctcttccgn cgtttcttta ttttatgggg acaggcattt ggggtcccac 540
tttacttttt gngngactc accccttcca gaaaantttc cgtgggcntc ngggatgtac 600
actggnggca ccccatgtt gaaccctttt 630

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<210> 74
 <211> 18
 <212> DNA
 <213> Unknown: Synthetic construct

<220>
 <221> variation
 <222> 3,12
 <223> N can be any nucleotide

<221> variation
 <222> 9
 <223> y = t/u or c

<400> 74
 ccnatgtayt tntccta 18

<210> 75
 <211> 18
 <212> DNA
 <213> Unknown: Synthetic construct

<220>
 <221> variation
 <222> 3, 12
 <223> N can be any nucleotide

<221> variation
 <222> 9
 <223> y = t/u or c

<400> 75
 ccnatgtayt tntcctc 18

<210> 76
 <211> 18
 <212> DNA
 <213> Unknown: Synthetic construct

<220>
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 <222> 3, 12
 <223> N can be any nucleotide

<221> variation
 <222> 9
 <223> y = t/u or c

<400> 76
 ccnatgtayt tntcctg 18

<210> 77
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 77
ccnatgtayt tntctcctt

18

<210> 78
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 78
ccnatgtayt tntctctta

18

<210> 79
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 79
ccnatgtayt tntctcttc

18

<210> 80
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
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<222> 3, 12

<223> N can be any nucleotide

<221> variation

<222> 9

<223> y = t/u or c

<400> 80

ccnatgtayt tncctcttg

18

<210> 81

<211> 18

<212> DNA

<213> Unknown: Synthetic construct

<220>

<221> variation

<222> 3, 12

<223> N can be any nucleotide

<221> variation

<222> 9

<223> y = t/u or c

<400> 81

ccnatgtayt tncctcttt

18

<210> 82

<211> 18

<212> DNA

<213> Unknown: Synthetic construct

<220>

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<222> 3, 12

<223> N can be any nucleotide

<221> variation

<222> 9

<223> y = t/u or c

<400> 82

ccnatgtayt tnccttcta

18

<210> 83

<211> 18

<212> DNA

<213> Unknown: Synthetic construct

<220>

<221> variation

<222> 3, 12

<223> N can be any nucleotide

<221> variation

<222> 9

<223> y = t/u or c

<400> 83

ccnatgtayt tncctcttc

18

<210> 84
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
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<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 84
ccnatgtayt tncttctg

18

<210> 85
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
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<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 85
ccnatgtayt tncttctt

18

<210> 86
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
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<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 86
ccnatgtayt tnctttta

18

<210> 87
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
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<222> 3, 12
<223> N can be any nucleotide

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<222> 9

<223> y = t/u or c

<400> 87

ccnatgtayt tnccttttc

18

<210> 88

<211> 18

<212> DNA

<213> Unknown: Synthetic construct

<220>

<221> variation

<222> 3, 12

<223> N can be any nucleotide

<221> variation

<222> 9

<223> y = t/u or c

<400> 88

ccnatgtayt tnccttttg

18

<210> 89

<211> 18

<212> DNA

<213> Unknown: Synthetic construct

<220>

<221> variation

<222> 3, 12

<223> N can be any nucleotide

<221> variation

<222> 9

<223> y = t/u or c

<400> 89

ccnatgtayt tnccttttt

18

<210> 90

<211> 18

<212> DNA

<213> Unknown: Synthetic construct

<220>

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<222> 3, 12

<223> N can be any nucleotide

<221> variation

<222> 9

<223> y = t/u or c

<400> 90

ccnatgtayt tnttccta

18

<210> 91

<211> 18

<212> DNA

<213> Unknown: Synthetic construct

<220>

<221> variation

<222> 3, 12

<223> N can be any nucleotide

<221> variation

<222> 9

<223> y = t/u or c

<400> 91

ccnatgtayt tnttcctc

18

<210> 92

<211> 18

<212> DNA

<213> Unknown: Synthetic construct

<220>

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<222> 3, 12

<223> N can be any nucleotide

<221> variation

<222> 9

<223> y = t/u or c

<400> 92

ccnatgtayt tnttcctg

18

<210> 93

<211> 18

<212> DNA

<213> Unknown: Synthetic construct

<220>

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<222> 3, 12

<223> N can be any nucleotide

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<222> 9

<223> y = t/u or c

<400> 93

ccnatgtayt tnttcctt

18

<210> 94

<211> 18

<212> DNA

<213> Unknown: Synthetic construct

<220>

<221> variation

<222> 3, 12

<223> N can be any nucleotide

<221> variation

<222> 9

<223> y = t/u or c

<400> 94
ccnatgtayt tnttctta

18

<210> 95
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
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<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 95
ccnatgtayt tnttcttc

18

<210> 96
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
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<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 96
ccnatgtayt tnttcttg

18

<210> 97
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 97
ccnatgtayt tnttcttt

18

<210> 98
<211> 18

<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 98
ccnatgtayt tntttcta

18

<210> 99
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 99
ccnatgtayt tntttctc

18

<210> 100
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 100
ccnatgtayt tntttctg

18

<210> 101
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 101
ccnatgtayt tntttctt

18

<210> 102
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 102
ccnatgtayt tnttttta

18

<210> 103
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 103
ccnatgtayt tntttttc

18

<210> 104
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 104
ccnatgtayt tntttttg

18

<210> 105
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<210> 106
<211> 31
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 4, 7, 10, 13, 20, 23, 26
<223> N can be any nucleotide

<220>
<221> variation
<222> 1, 2, 8, 12, 15
<223> y = t or c

<220>
<221> variation
<222> 11, 29
<223> r = a or g

<400> 106
yytngtynytn ryncygatan atnatnggrt t

31

<210> 107
<211> 28
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 6, 9, 12, 17, 23
<223> N can be any nucleotide

<220>
<221> variation
<222> 1
<223> y = t or c

<220>
<221> variation
<222> 3, 14, 20, 26
<223> r = a or g

<220>
<221> variation
<222> 8
<223> k = t or g

<220>
<221> variation
<222> 13
<223> w = t or a

<400> 107
ytrtttnckna gnwrtanatr aanggrtt

28

<210> 108
<211> 32
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 9, 12, 15, 21, 24, 27
<223> N can be any nucleotide

<220>
<221> variation
<222> 3, 23
<223> y = t or c

<220>
<221> variation
<222> 6, 18, 30
<223> r = a or g

<220>
<221> variation
<222> 11
<223> k = t or g

<220>
<221> variation
<222> 17
<223> w = t or a

<220>
<221> variation
<222> 26
<223> s = g or c

<400> 108
tcytrtrttnc knagngwrta naynasnggr tt

32

<210> 109
<211> 32
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 9, 12, 15, 21, 24, 27
<223> N can be any nucleotide

<220>
<221> variation
<222> 6, 14, 18, 30
<223> r = a or g

<220>
 <221> variation
 <222> 11
 <223> k = t or g

<220>
 <221> variation
 <222> 5, 16
 <223> s = g or c

<400> 109
 tcntsrttnc knarnsarta natnatnggr tt

32

<210> 110
 <211> 27
 <212> DNA
 <213> Unknown: Synthetic construct

<220>
 <221> variation
 <222> 4, 7, 10, 16, 22
 <223> N can be any nucleotide

<220>
 <221> variation
 <222> 1, 9, 13, 19, 25
 <223> r = a or g

<220>
 <221> variation
 <222> 6
 <223> k = t or g

<220>
 <221> variation
 <222> 12
 <223> w = t or a

<220>
 <221> variation
 <222> 11
 <223> s = g or c

<400> 110
 rttnecknarn swrtanatra anggrtt

27

<210> 111
 <211> 886
 <212> DNA
 <213> Homo sapiens

<220>
 <221> variation
 <222> 7, 11, 16, 18, 21, 209, 231, 258, 259, 266, 267, 269, 282, 287, 289,
 301, 308, 314, 315, 316, 319, 321, 325, 329, 337, 338, 339, 346, 368, 383,
 385, 393, 398, 412, 413, 416, 417, 420, 439, 440, 442, 447, 453, 459, 474,
 479, 484, 488, 499, 508, 513, 521, 526, 536, 541, 549, 559, 574, 579, 587,
 590, 596, 597, 601, 602, 610, 618, 622, 633, 635, 648, 649, 650, 652, 654,

661, 666, 688, 690, 692, 698, 705, 713, 720, 724, 726, 731, 732, 736, 771,
788, 790, 795, 801, 802, 807, 811, 817, 829, 836, 840, 846, 849, 850, 855,
859, 870, 872, 874, 877, 878, 886

<223> n = any nucleotide

<400> 111

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gggccntcg ngatatnctt naccctctga tgctgctcga ggggccggca gggatgatga 60
tatctgcaga attcgccctt ctgttacgca ggaatatata aaggggttac tgaggaataa 120
ataaatgggt tactgaggaa taaataaatg gggtactgag gaacaaatac atagggttga 180
aagaactgta aaatagaaaa aggaccttnt gctgctcctc aggatggcgg nacttagggg 240
ccatgtacat gacgatgnng ctgccnntna agagtccac tntcaneng ctcagcccg 300
ncttttntct cacnnncnt ntttntctnc cctcttnnnc tctttntctc ctattcccc 360
ccctccnct cctccctttt gcntnaccat tgncctnat ccctttaatt cnntcnntcn 420
tctccctctt attccttcnn tnttcgnctt cantctctnc ctctttctcc cccnctttct 480
ctctctnct ctctctctng tcctctctng tctttctctt nctanttec ctctancctt 540
ntcttattnc tctctatnc cctctcatc cactctctc cctctctcn tactttnctc 600
nctcttccn ctccgtctc cctttctct tcntnacgc accctcnnn cntnctctc 660
ntctctctc cactctctc tctccctnnc cntcactnt ctcnctctc acntcctatn 720
ctcncttct ncttnactt tgtaacgctc tctctctct ctctacgcac nttttatctc 780
ttatctcnnc catnccctc nttctnnc nctattnact cttttctcnc atactntatn 840
ctctntcnnc cttnatcnc ctcctctctn tnancnntc actgen 886

```

<210> 112

<211> 625

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 13, 31, 36-37, 40, 45-48, 50, 53-54, 61, 63, 67-68, 70, 473, 512,
523, 526, 535, 542-543, 545, 549, 558, 566, 571, 582, 589, 593-594, 603, 612-
614, 616, 621, 623-624

<223> n = any nucleotide

<400> 112

```

gctgctcga cngcgcagcg tcggcagtg naggggnatn tgccnnnntn gcnnttagat 60
nanaggntn agtatggggg tgaccacagt ggtacataac tgaggctgtt gcacttgagt 120
gtgagttgcg ggtggcagca gaactaagg acacccctag gattgcacca taaaataagg 180
agacaactga gagtgagat gcacaggtgg aaaatgcctt gtacttcccc tgagctgatg 240
agattgcatg tatggaagaa attatcttag agtaagagta aaggatccca gtcaggggac 300
ctccaccag cagcgcaact gtaaaatata tcaccatgtg attaagaaag ctatcagaac 360
aagcaagttg gatgacctga ttaagttcac agaaaaagt ggggatttct aaggctgtgc 420
agaaggacag ccgtactacc attagattt gttagcaagga atacagagca ctnatggctc 480
aggatgccag aaccagcagt cacagagggt gngggtttca tantgnccct gtagngtcag 540
cnnngacna gatggccnca aaccgntctt nggcccctcac gncctggna ggnngttttc 600
tantccacca cnnntnttct nannc 625

```

<210> 113

<211> 625

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 6-7, 30, 113, 128, 137, 142, 150, 157, 174, 297, 310, 313, 335, 354,
356, 377, 382, 385, 389, 393, 421, 429, 431, 433, 435, 438, 440, 442-443,
446, 455, 457, 465, 467, 477, 488, 491, 501-502, 504, 508-509, 515, 522, 525-
526, 529-530, 542, 557-559, 561, 564, 565, 568, 577, 579-581, 584, 587-589,
591, 596-603, 607-610, 612-613

<223> n = any nucleotide

<400> 113

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catgcnnag caggctcgag cgccggcagn gtgagggata tctgcagaat tcgcccttcc 60
tatgtacttt ttcctgagcg tatacacaat cccatcatgt actggggaga agncagacca 120
tatcattnac aagctgnctt tngcagatgn actttgnttt ctcattaggg tgcncagagt 180
acttcctcct ggcagccatg gcttatgacc gctgtcttgc catctgctat cctttacact 240
acggagccat catgagtagc ctgctctcag cgcagctggc cctgggctcc tgggtgngtg 300
gtttcgcgcn cantgcagcg cccacagccc tcagnagcgg tcttgcctct ctgngncccc 360
cgtgccatta accactnctt tngcngcant gcnccctgca ttgtcttgtc ctgcccacca 420
nacagcagna nancntgngn cnnttngatc gctgntncgc tctcngntct cacteenttc 480
caccttttnc ntcgcattcc nntntccnnc tcgcnctcct gnccnntcnn tctcctcttc 540
tnaacgcgtc ctccgannng nctnnatgnt cgtctcntnn ntgngcnnng ncagcnnnnn 600
nnnccannnn tnngtgcgcc gctcc 625
```

<210> 114

<211> 651

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 2, 12-13, 20, 23, 188, 375, 399, 402, 416, 443, 460, 472, 474-475, 480, 484, 487-488, 502, 505, 522-523, 529, 532, 537-538, 546, 553, 555, 557, 561, 564-565, 573, 575, 577, 581, 583, 586, 591, 594, 617, 634, 636, 643

<223> n = any nucleotide

<400> 114

```
gnttaagccc tnnccctctn gangcatgct cgagcggccg ccagtgtgat ggatatctgc 60
agaattcgcc cttgttccgc aaacaataga tgaaaggatt aagtgaagga gtgcccaccg 120
catagaagag accaaagaac ttgcccctcc cttgggcata cggatttttg ggctggaggt 180
agacagcnat gactgagctg tagaagaggg tgaccacagt gagatgggag gaggaggtcc 240
caaaggcctt tctccatgct gtggcagagt taatcctcag cactgcctgg gcagtggctc 300
cataagaggc aaggatgagg ctgagaggca caaccacgaa gatgacactg gacacagcca 360
actggatttc attgnaggag gcatctccac aggagagtnc gnatcagaga tgggancctc 420
acataaaaaa gtcattctatc tgntggtggg gacagaatgn ccatgtggag gntnnatgtn 480
cgtntcnnac ctcttatttt tnttncctct ttcttctcgt cnntcccent tntccennct 540
cgccanttcc atnncntct ntcnntttt ttntntnacc ntntntcat ntentctctt 600
tattctcttt ctcttgnctc tcccttctct ctentnttcc canctctccc g 651
```

<210> 115

<211> 850

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 3, 15, 279, 288, 292, 295, 296, 299, 307, 309, 317-319, 322, 326-327, 329, 335, 340, 343, 345-346, 354, 362, 367-368, 377, 380-382, 386, 391, 394, 396, 399-400, 410, 412, 415-416, 418, 433, 436, 442, 444, 451, 455, 466, 468-469, 471, 474, 482, 488, 490, 500, 505, 514, 516, 522, 530, 537, 548, 550, 552, 559, 562-565, 569, 570, 571-573, 576, 581, 592, 597, 603, 605-606, 608, 617, 619, 624, 627, 630, 635-636, 643, 647, 653, 661-663, 667, 673-675, 678, 690, 697-698, 709-711, 720, 724, 727, 731, 736, 746, 760, 768, 771, 783-784, 789, 791, 794, 796, 797, 800-801, 808, 810, 816, 818, 821-822, 832, 836

<223> n = any nucleotide

<400> 115

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ggntctcggt acaanacttg gccctctaga tgcattgctcg agcggccgcc agtgtgatgg 60
```

```

atatctgcag aattcgccct tccaatgtat ttattcctgt tatttgagaga cctggagagc 120
ttcctccttg tggccatggc ctatgaccgc tatgtggcca tctgcttccc cctgcactac 180
accgccatca tgagcccat gctctgtctc gccctgggtg cgctgacctg ggtgctgacc 240
accttccatg ccatgttaca cactttactc atggccagnt tgtgcttntg tncennacna 300
ttgttgntnc cccactnnnc tntgtntna gtctnctctn centnnactg ctctcctct 360
tntccnnga gtccctnggn nncgtngtcg nttncngcnn tcaattgcan tncennctc 420
atcctttctt tanttntcca tntnttact natttctctt tatccnctnt ntcnccctcc 480
anctcctnct tagcttactn tttctgtctc tccngngctc ancttttctn ccatatnttc 540
ttctctcnct tntctctcnc tnnnnccenn nnntctctgt ntctctgtct cntcttnacg 600
tctnnctct tatttantnt ctncnctn tctcnngctc cancgngta ccngccctat 660
nnctctctcc gannntgntc atggcatctn cacattngc cctactatnn ncgatctatn 720
ttcncgncat ntattncaca tccacntgca ctctactcn ctctctance nccgtacatc 780
gcnnctacng ntgnctntcn nccgtctctn cggcncnat nntccactt tntctnggtc 840
ccctctccg
850

```

<210> 116

<211> 620

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 451, 479, 501, 533, 542, 550, 553, 561, 572, 582, 585, 600, 604-605

<223> n = any nucleotide

<400> 116

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gatgcattgt cgagcgccc cagtgtgatg gatattctgca gaattcgccc ttccaatgta 60
ctttttcctg aagaacctct ctgttttgga tctgtgtctac atctcagtc ctgtgcctaa 120
atccatccgt aactccctga ctgcgagaag ctccatctct tatcttggt gtgtggctca 180
agcctatttt ttctctgct ttgcattctc tgagctggcc ttcttactg tcatgtctta 240
tgaccgctat gttgccattt gccacccct ccaatacaga gccgtgatga catcaggagg 300
gtgctatcag atggcagtc ccaactggct aagctgtctt tctacgcag ccgtccacac 360
tggaacatg ttccgggagc acgtttgcag atccaatgtg atccaccagt tcttccgtga 420
catccctcag gtgttgccc tggtttctg ngaggtttt tttgtagagc tttgaccng 480
cctgagcct caatgcttgg ntctgggatg ctttattccc atgatgatct ccnattttcc 540
anatctctn aanggggctc nagaatccct tnaggaccag antcnagcta aaagcctttn 600
ccnnctgct tccccccacg
620

```

<210> 117

<211> 628

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 5, 9, 403, 505, 552

<223> n = any nucleotide

<400> 117

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tggcnctcng atgcattgtc gagcgccgc cagtgtgatg gatattctgca gaattcgccc 60
ttccaatgta tttgttctct ttatttgagg acctggagag ctctcctctt gtggccatgg 120
cctatgaccg ctatgtggcc atctgtctcc cctgcacta caccgccatc atgagcccca 180
tgctctgtct cgccctgggt gcgctgtcct ggggtgtgac cacttccac gccatgttac 240
acactttact catggccagg ttgtgttttt gtgcagacaa tgtgatcccc cactttttct 300
gtgatattgt tgctctgtct aagctggcct tctctgacac tcgagttaat gaatgggtga 360
tatttatcat gggagggtc attcttgcat cccattccta ctntactctg gggtctatgc 420
aagaattgtc tctccatcc tcaaggctcc ttcttctaag ggtatctgca aggccttctc 480
tacttgtggc tcccacctg tctgnggtgt cactgggtct atggaaccgt tattgtctc 540
tacttatgct cntcagctaa tagttctact cttaaaggaca ctgcattggc atgatgtaca 600

```

ctgtggtgac ccccatgctg aaccctt

628

<210> 118
 <211> 783
 <212> DNA
 <213> Homo sapiens

<220>

<221> variation

<222> 17, 25, 184, 187-188, 199, 202, 206, 212, 214-215, 223, 227-228, 232, 248, 250, 252-253, 255-256, 261-264, 266, 268, 271, 273, 276, 278, 284, 289, 292, 295-296, 298, 300-302, 306, 310, 315-316, 320-322, 325, 329, 333, 337, 340-341, 346, 349, 355, 369, 371, 373-374, 379-380, 383-384, 387-388, 391, 402, 407, 409, 417, 419-420, 436-437, 441-442, 445, 447-448, 450, 456-458, 461, 469, 472, 477-479, 486-487, 490, 493, 503, 510, 512, 517, 530, 540, 542, 544, 552-553, 565, 572, 587, 595, 597-598, 600, 611, 614, 617-618, 622-623, 625, 634-636, 639, 644-645, 646, 652-653, 663, 665, 668, 673-674, 679, 681, 683, 695-696, 699, 706, 710, 712, 716, 725-726, 731-732, 741, 745, 748-750, 763, 771, 774, 776, 772, 774-775, 777-778, 780, 782

<223> n = any nucleotide

<400> 118

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gatgatgtct gagcggnccg agtgngatgg atatctgcag aattcgccct tcccatgtat 60
ttgttctctga gcaacctctc ctctctggag atttggtata ccacagcagc agtgcccaaa 120
gcactggcca tcctactggg gagaagacag accatatcat ttacaagctg ccttttgcag 180
atgnacnntg ttttctcant angccntaca gngnncatgt ttncgcnnngc cntgacttat 240
gacgcgcntn cnnccntatc nnnntntnct ntnacncnac ttctcatna tntgnnctn 300
nnttcnctn tggcnctcn nntcnegnc ttncctntgn ncgtctcnc ccttnggcct 360
gcattctctn ntntcctnn ccnncgncct ntcttctct cntacctnt ttctgtntnn 420
tccctccct ctctgntgc nntcnncn catctnnntg ntctgatcnc tntctnnnt 480
ccatcnngtn ctnttctct gtntctctn cncgcncct gcattactgn gcattatatn 540
cncngtctca tnnctatctt cegtntctgt cncctctct ctatgcncga cgtcntntn 600
tactatcgtc ntctcnnt tnnngcctgt tcnngcnc cngnncntcc anntactctc 660
cangntctc ctntcctnt ncctgtctc attcnnctnt accgcntctn gntctctct 720
cgctnntccc nnttctctc nctcncgmn ccttcagct ntcnanttct antnngnncn 780
cnc

```

783

<210> 119
 <211> 674
 <212> DNA
 <213> Homo sapiens

<220>

<221> variation

<222> 1, 2, 114, 207, 212, 253, 261, 294, 316-317, 325, 327-329, 333-334, 340, 345, 352, 355, 364, 382, 384, 393-394, 397, 414, 418, 424, 426, 431, 440, 447, 449, 452, 455, 462, 467, 474, 482, 486, 492-493, 496, 500, 503, 509, 516, 519-520, 525, 532, 534, 539, 544, 550, 552, 555, 559, 564, 566, 573, 576, 586, 591, 594, 598, 605, 608, 610-611, 618, 626, 629, 635, 638, 644, 660-661, 666, 669

<223> n = any nucleotide

<400> 119

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nntagatgca tgctcgagcg gcccgccagt gtgatggata tctgcagaat tgccttcc 60
tatgtatttc ttctggcca acctgtctt cttggagacc tggtagatct ctgngactgt 120
gccaagtta ctgtttagtt ttggtctgc gaacaacagc atctctttca cactctgtat 180
gatacaactg tacttcttca ttgctcncat gngcacagaa tgcgtgcttc tggccgccat 240
ggcctatgac cgntatgtg ncatctggcg cccactccac taccacaacca taantgagcc 300
atgggctcct gctcnnct cgtntnnna tanngaaccn acagngtagc gncanctccc 360

```



```

tgtncgagaa tctacttcat cntnctgcct tannttntgt gggcccaatg tgcntaanca 420
cttnngntctg nggacatttn ctccagnant tnaantctct tncctgnaca aganactgtt 480
cnttancttg annatnttcn ggnacattnt tcctanggnn ttggnacgag cntntctanc 540
accngcactn cncantaant gctncngttc tantcngtgc cattcntgtg nctnccentt 600
tcatngcntn nctcccneg aaagcnaant aagtngngnt cttnactttc gcccccaen 660
ncatncant ggcc 674

```

<210> 120

<211> 643

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 359, 373, 439, 463, 506, 537, 564, 584, 594, 604, 610, 620, 633-634, 636

<223> n = any nucleotide

<400> 120

```

ggccctctag atgcatgctc gagcggccgc cagtgtgatg gatattctgca gaattcgccc 60
ttcctatgta ttttttcctg ttatttggag acctggagag cctcctcctt gtggccatgg 120
cctatgaccg ctatgtggcc atctgcttcc cctgcaacta caccgccatc atgagcccca 180
tgctctgtct cgccctgggtg gcgctgtcct ggggtgctgac cacttccat gccatgttac 240
acactttact catggccagg ttgtgttttt gtgcagacaa tgtgatcccc cactttttct 300
gtgatatgtc tgctctgctg aagctggcct tctctgacac tcgagttaat gaatgggtng 360
atatttatca tngaggggtc cattcttctc atcccatcct tactcctcct tgggtcctat 420
gcgagaattg tctcctccnt cctcaaaggc cccttcttct aangggatc tgcaaggcct 480
tctctacttg gtggctcccc cctgncctgt ggtgtcactg ttccatttgg aaaccgntat 540
tgggactcta cttatgctca tcangctaata agttttactc ttangggaca ctgncaatgg 600
cctntgaagn tacccttggg gtggaccccc atnntngaac ccc 643

```

<210> 121

<211> 657

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 429, 447, 453, 484, 510, 519, 542, 544, 546, 549, 552, 561, 581, 587, 600-601, 613, 618, 620-621, 623, 632, 643, 655-656

<223> n = any nucleotide

<400> 121

```

ggccctctag atgcatgctc gagcggccgc cagtgtgatg gatattctgca gaattcgccc 60
ttccaatgta ctttttcctg ttatttggag acctggagag cttcctcctt gtggccatgg 120
cctatgaccg ctatgtggcc atctgcttcc cctgcaacta caccgccatc atgagcccca 180
tgctctgtct cgccctgggtg gcgctgtcct ggggtgctgac cacttccat gccatgttac 240
acactttact catggccagg ttgtgttttt gtgcagacaa tgtgatcccc cactttttct 300
gtgatatgtc tgctctgctg aagctggcct tctctgacac tcgagttaat gaatgggtga 360
tatttatcat gggaggggtc attcttgcct cccattccta ctcaccttgg ggtcctatgc 420
aagaattgnc tccttccatc tcaaggncct ttnttctaaa gggatatctgc aaggccttct 480
ctanttggtg ctcccaccct gtcttgtggn tggcactgnt tctaattggga accggttaatt 540
gnancnctna cnttatgctc natcaactta aatagtttct nactttnaaa gggaccactn 600
ntcattgggt tanggatngn nenttgggtt cntggaaatc ccnatcattc ttacnng 657

```

<210> 122

<211> 622

<212> DNA
<213> Homo sapiens

<220>
<221> variation
<222> 9, 536, 543, 587, 609, 616, 619, 621-622
<223> n = any nucleotide

<400> 122
atgaccctna gatgcattgct cgagcggccg ccagtgatgat ggatatctgc agaattcgcc 60
cttccaatgt atttggtcct gtccaacctg tcctttttgg atattggctt tatctttaca 120
ataattccca atattgctaga tcatattagc tcaggaatta agctgatttc ttatggggag 180
tgtctgacac aactctatct ctctggccta tttgcagatc tggacaacaa ctttctcctg 240
gctgtgttgg ccttgaccg ctatgtggcc atcagccatc ctctccatta tggccctaacc 300
atgaactccc aacgctgtgt cctgttggtg gctgtgtcat gggatgatcac tattttacat 360
gccctagtgc ataccctcct agtgaccagg ctttccttct gtggtccaaa tattatccct 420
cacttcttct gtgatctggc cccactcctg aagctggcct gctccagtac ttgtgtcaat 480
gatctgggtg tcatccttgc ggcaggaaca ctgctgaatg cgccctttgc tgcattctta 540
tgnccctact ttacattgca ttggccatcc tgagaattga ttcccnaggg ggtatgcaaa 600
gggcccttnt ccagctcnc nn 622

<210> 123
<211> 610
<212> DNA
<213> Homo sapiens

<220>
<221> variation
<222> 4, 445, 568-569, 580, 587, 600, 607, 610
<223> n = any nucleotide

<400> 123
gcgncgcagt gtgatggata tctgcagaat tcgcccttcc aatgtatttg tttctgttat 60
ttggagacct ggagagcttc ctcttctgtg ccatggccta tgaccgctat gtggccatct 120
gcttccccct gcactacacc gccatcatga gccccatgct ctgtctcgcc ctgggtggcg 180
tgtcctgggt gctgaccacc ttccatgcca tgttacacac tttactcatg gccaggttgt 240
gtttttgtgc agacaatgtg atccccact ttttctgtga tatgtctgct ctgctgaagc 300
tggccttctc tgacactcga gttaatgaat gggatgatatt tatcatggga gggctcattc 360
ttgtcatccc attcctactc atccttgggt cctatgcaag aattgtctcc tccatcctca 420
aggtcccttc ttctaagggt atctngcaag gccttctcta cttgaggctc cacctgcctg 480
tggtgtcact gttctatgga accgttattg gtctctactt atgctcatca gccataaagt 540
tttactctaa aaggacactt gtcattggnnt atgatgtacn ctgtggngac ccccatgctn 600
aaccctntn 610

<210> 124
<211> 660
<212> DNA
<213> Homo sapiens

<220>
<221> variation
<222> 469, 477, 482, 484, 493, 500, 509, 524, 527, 530, 536, 542, 549,
553-555, 561, 571, 580, 581, 583, 591, 597, 602, 609, 617-619, 624-625, 627,
636, 638, 642, 645-646
<223> n = any nucleotide

<400> 124
ccttggggcc tctagatgca tgctcgagcg gccgccagtg tgatggatat ctgcagaatt 60

```

cgcccttctt tattcctgag tgaatatatg aggggggttg cactgctgtt aagagtggac 120
agggaaatgg aaactagacg aacgtgacaa atccacgtgg atccagaaaa ataggaatca 180
ctgaatgccg aagggcaggt cacagaggag gaagaccagc actctgagca ggatgggtcat 240
gtacagcctg gtcaagggca ttttccggga tccacaaagg atcctgacca gcagaaccgg 300
gctggaccgg cagagaacca cacataaaaa aatcagccat gtgactgtga tgaatctga 360
tgtttcacac caaacagaat caagcaccac tagacaggaa gccacagaac atccattcca 420
ggatgctctg cagcagggac agggcccaga gcaggacaca cgactgctna ccaggtnntt 480
tngngtggct gcnagctctn cttaggatng tccccaaagg ttgncnggn cggtnntt 540
gnttgcttnt cgnnncccta nctatgcctt ngctcctgtt nangcttgac nattggncct 600
cncccacgng gcttaannnt ctcnngncgc atttanancg tnatntact tccctgtgct 660

```

<210> 125

<211> 632

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 2, 488, 505, 507, 586, 618

<223> n = any nucleotide

<400> 125

```

gnccctctag atgcatgtct gagcgccgag cagtgtgatg gatattctga gaattcgccc 60
ttcctatgta cttcttctct ttatttggag acctggagag cttcctcctt gtggccatgg 120
cctatgaccg ctatgtggcc atctgtctcc ccctgcacta caccgccatc atgagcccca 180
tgctctgtct cgccctgggt gcgctgtcct ggggtgctgac caccttccat gccatgttac 240
acactttact catggccagg ttgtgttttt gtgcagacaa tgtgatcccc cactttttct 300
gtgatatgtc tgctctgtct aagctggcct tctctgacac tgcagttaat gaatgggtga 360
tatttatcat gggagggtct attctgttca tccattcctt actcatcctt gggtcctatg 420
caagaattgt ctctccatc ctcaagggtcc cttcttctaa gggatatctg aaggccttct 480
ctacttgnng ctcccactg tcttngngng cactgttcta tgggaaccgg tattggtctc 540
tacttaatgc tcatcaagct aatagtctta ctctaaagga cactgncatg gctatgatgt 600
acactgtggt gaccccnat gctgacccat tc 632

```

<210> 126

<211> 642

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 331, 422, 435, 441, 462, 467-468, 471, 479, 500, 502, 513, 521, 537, 543-545, 549, 551, 563, 565-566, 569, 577, 582-583, 586, 594, 596, 611, 614, 620, 624, 631, 639-640

<223> n = any nucleotide

<400> 126

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tctagatgca tgctcgagcg gccgcagtgt gatggatatc tgcagaattc gcccttccaa 60
tgtacttgtt cctggcagcc atggcttatg accgctgtct tgccatctgc tatcctttac 120
actacggagc catcatgagt agcctgtctc cagcgcagct ggccctgggc tctgtgggtg 180
gtgggttctg ggccattgca gtgcccacag ccctcatcag tggcctgtcc ttctgtggcc 240
cccggtgccat caaccacttc ttctgtgaca ttgcaccctg gattgccctg gcctgcacca 300
acacacaggc agtagagctt gtggcctttg ngattgctgg tgtggttatc ctgagttcat 360
gcctcatcac ctttgtctcc tatgtggaca tcatcagcac catecttcag gatccctttt 420
gncagtgcgc ggagnaaaag ncttttccac gtgctcctcg cntctcnneg nggtgctcna 480
tttgggtatg gtccacaagn tnttcttca cgnccggatt ntccattcaa aagatgncct 540
tgnnnntttn ncaaaagctt ggncnncgnc ctgaaanact gnnngtngact tcangnttta 600
aaactccttt natntcactn ttanggggaac naggggcggn ac 642

```

<210> 127
 <211> 688
 <212> DNA
 <213> Homo sapiens

<220>
 <221> variation
 <222> 1, 4, 54, 154, 269, 284, 294, 327, 339, 342, 344, 360, 362, 366, 372-373, 379, 382, 390, 393, 395, 397, 402, 408, 410-411, 417, 425, 428, 433, 435, 442, 446-448, 456, 461, 468, 473, 476, 479, 485, 487, 489, 508-509, 514-515, 526, 532-533, 535, 537, 539, 547, 550-551, 553, 555, 559, 572, 578, 582, 587, 595, 597, 602-603, 609-613, 617, 619, 621, 630, 634, 636, 640, 650, 652, 660, 679, 681, 683-684
 <223> n = any nucleotide

<400> 127
 ntgngccctc tagatgcatg ctcgagcggc cgccagtgtg atggatatct gcangaattc 60
 gcccttccca tgtatttatt ccttagcctg ttggattccc agctgcacag ctggattgtg 120
 ttacacaact caccttcttc aagaatgtgg aaanctataa ttttttttct gtgacccatc 180
 tcaacttctc aaccttgcct gttctgacag catcatcaat aacatattat gtattttaga 240
 tatccctata tttgggtttc tccccattnc agggatcctt ttgncttacc atanaattgt 300
 cctcctccat tccaagaatt ccattgncag acgggacgna tnangccttc tctacctgtg 360
 cntctnaccg gnnagtcgnt tntttatctn tgnantnccc tngggcgncn nccctgncct 420
 cagcnttngt cncnttctc cncacnnntt cgtcgtgtt ncccagtnct gtntctnctc 480
 tctcntnctc tttctgcctc cctccanng tctncttctc tcagncctt tnnngcnct 540
 gccagcncn nangntcnc cctctcctc cntgtctnct cctcctntt cttcntntcc 600
 tnnctcatnn nnncgncnc ncgtctctcn cctntctn taccgactcn gncgtctctn 660
 cgcctacgac ctccctgtnc ncnncggg 688

<210> 128
 <211> 619
 <212> DNA
 <213> Homo sapiens

<220>
 <221> variation
 <222> 10, 46, 60, 322, 365-366, 464, 472, 475, 482, 493, 498, 498, 504, 517, 535, 543, 547, 556, 564, 584, 590, 600, 602, 610
 <223> n = any nucleotide

<400> 128
 gcgtgctgcn agcggggcgg cagagtgagc ggatatctgc agaatncgcc cttccgatgn 60
 atttctttct aagcaactta tctttcattg acatctgcta ctcttctgct gtggctccca 120
 atatgctcac tgacttcttc tgggagcaga agaccatata atttgtgggc tgtgctgctc 180
 agtttttttt ctttgtcggc atgggtctgt ctgagtgcct cctcctgact gctatggcat 240
 acgaccgata tgcagccatc tccagccccc ttctctaccc cactatcatg acccagggcc 300
 tctgtacacg catggtgggt gnggcataatg ttggtggctt cctgagctcc ctgatccagg 360
 ccagnnccat atttaggctt cacttttgcg gacccaacat catcaaccac ttcttctgcg 420
 acctccacca gtccctggctc tgtcttgctc tgacaccttc cttnagtcaa gncgncgaat 480
 tntcccgtgg tgntcaentg tcgngaggaa acatcgnttt cctccaaccc cttantctcc 540
 canggnntac catagnctc gcgngtcctt gaagaatcct tttngccaan cgggcgaatn 600
 gnaagccctn ccaccgcc 619

<210> 129
 <211> 697
 <212> DNA
 <213> Homo sapiens

<220>

<221> variation

<222> 17, 223, 238, 260, 304, 310, 315, 317, 322, 325, 327, 329, 341, 345-347, 350, 351, 356, 361, 369, 373-374, 378, 386, 391, 394, 396, 403, 414, 416, 426, 447-448, 456, 459, 461-462, 469, 473, 475, 477, 482, 488, 493-495, 504, 508, 511, 515, 518, 523, 527, 532-533, 537, 543, 548, 555, 558, 561, 570-571, 578, 580, 587-588, 592, 598-599, 601-602, 606, 608, 613, 619, 622-623, 634-635, 645, 648, 656, 658, 661, 665, 674-675, 682, 685, 687, 694-695

<223> n = any nucleotide

<400> 129

```

gcggcgcagt gtgatgntat ctgacgaatt cgcccttccg atgtatttat ttctaagcaa 60
cttatctttc attgacatct gctactcttc tgctgtggct cccaatatgc tcaactgactt 120
cttctgggag cagaagacca tatcatttgt gggctgtgct gctcagtttt ttttctttgt 180
cgccatgggt ctgtctgagt gcctcctcct gactgctatg gcntacgacc gatatgengc 240
catctccagc ccccttctcn accccactat catgaccag ggcctctgta cacgcatgga 300
ggtngcgccn tatgntngtt gntcnctng agctccctga nccannnctn ntcacntatt 360
ntaggctcna ccnntcgngc tcccgnctca ncancnaacc ccnttcgttc ctgnanactt 420
ctccanacag ttcttggett ttctgcnttc gcctcncgnc nnccttatnc ttnangntca 480
cncctganct gcnntttctt ccangecngc ncgncancc cgnctctntct gnnngaancct 540
ttncctatct gctcnatnct nctctcatcn ntctctantn ctctccnct cncgctcnnt 600
ncttncnt ctnaacctnt cnatcctca cctnngatat cctcncgntc tttcgnctc 660
nttctctgtc cganntctc anacnctcc ctanncg 697

```

<210> 130

<211> 625

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 473, 502, 524, 547, 550, 567, 572, 590, 596, 614-615, 619, 623

<223> n = any nucleotide

<400> 130

```

ctctagatgc atgctcgagc ggccgccagt gtgatggata tctgcagaat tcgcccttcc 60
tatgtattta ttccttagcc acttgccct cactgacatc tccttttcat ctgtcactgt 120
ccctaagatg ctgatgaaca tgcagactca gcacctagcc gtcttttaca agggatgcat 180
ttcacagaca ttttttttca ttttttttgc tgacttagac agtttctta tcacttcaat 240
ggcatataac aggtatgtgg ccatctgaca tcctctacat tatgccacca tcatgactca 300
gagccagtgt gtcattgctg tggtgggtc ctgggtcctc gcttgtgctg gtgctctttt 360
gcgtaccctc ctcttgccc agcttctct ctgtgctgac cacatcatcc ctactactt 420
ctgtgacctt ggtgccctgc tcaagttggc ctgtcagac acctccctca atnagttagc 480
aatctttaca ggagcattga cnggcattat gcttccattc ctgngcatcc tgggttctta 540
tgggcanatn tgggggtcac cattctncag anttcttta ccagggcatn tgcaangcct 600
tggccacttg tggnnccnc tcneg 625

```

<210> 131

<211> 657

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 344, 419, 443, 464, 486, 521, 524, 535, 537-538, 545, 552, 564, 567, 572, 584, 586, 588, 601, 604, 608-609, 611-612, 616, 618, 620, 622, 626, 629-630, 633, 638-639, 643, 645, 655

<223> n = any nucleotide

<400> 131

```

ttggcctcta gatgcatgct cgagcgccgc cagtgtgatg gatatctgca gaattcgccc 60
ttgatacatg attgggttgc ggaagggaata aatcatcggg ttgcggaagg aataaatata 120
tcgggttgcg gaaggaataa atacatcggg ttgcggaagg aataaatata tcgggttgcg 180
gaaggaataa atcatcgggt tcggaagga ataaatacat cgggttgcg aaggaataaa 240
tacatcgggt tgcgtaagga ataaatcatt gggttgcgta aggaataaat cattgggttg 300
cgtaaggaat aaatcattgg gttgcgtaag gaataaatca ttgngttgcg taaggaataa 360
atctttgtgc tggtagcgat ctatcatggg gttacgaaag ggaagaaata cattggaang 420
ggcgaattcc agcacactgc cgnccgctac tagtgggac cganctcggg accaagcttt 480
gatgcntagc ttgagtattt taacgccgcc aacctaaaat ngcnttggcc ttacnenntg 540
gaccnagctt gnttcccttg cgtnaanttt cnttatctct cctntntntc ttctccccc 600
ncanaatnnt nccccngntn ancaencann ttntatanne ctngngctcc cctantc 657

```

<210> 132

<211> 624

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 7, 27, 34, 39, 481, 484, 489, 493, 502, 520, 566, 614, 623-624

<223> n = any nucleotide

<400> 132

```

tggcccncta gatgcatgct cgagcgncgc cagngtgang gatatctgca gaattcgccc 60
ttcctatgta tttattcctt aatgtcctct cgcttcttga tttttgttac tcttctgtgg 120
tcacaccta gctcttgggc aacttcctgg tctctgacaa gtccatctct tttgagggct 180
gtgtggtcca gctcgcttc tttgtagtgc atgtgacagc tgagagcttc ctgctggcct 240
ccatggccta tgaccgcttc ctatccatct gtcaaccctt ccattatggg tctatcatga 300
ccagggggac ctgtctccag ctggtagctg tgtcctatgc atttggtgga gccaaactccg 360
ctatccagac tggaaatgtc tttgccctgc ctttctgtgg gcccaaccag ctaacacact 420
actactgtga cataccaccc cttctccacc tggcttgtgc caacacagcc acagcaagag 480
nggncctcna tgncttttct gntctggcac cttctggcn gctgcaggca ttctcacctc 540
taccggcttg ggcttggggg ccaatnggga ggatgcgcct caagaacagg gagggagaaa 600
ggactcccca cttntgcctc ccnn 624

```

<210> 133

<211> 590

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 161, 185, 190, 221, 278, 303, 320, 337, 348, 360, 371, 387-388, 390, 393, 395, 402, 407, 409, 413-414, 423, 437, 449, 455, 459, 461, 464, 466-467, 468, 471, 475, 482, 484, 487, 489, 491, 493-495, 499, 500, 503-504, 510, 515, 519-520, 528, 538, 540, 541, 543, 546, 548, 555-556, 558, 563, 566, 568, 572, 575, 584-586, 588

<223> n = any nucleotide

<400> 133

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ggagttgata tgaacgggtt aagtgaagga gtgcccactg catagaagag accaaagaac 60
ttgcccctcc cttgggcata cggatttttg ggctggagg agacagcaat gactgagctg 120
cagaagaggg tgaccacagt gagatgggag gagcaggctc naaaggcctt tctccatgct 180
gtggnagagn taattctcag cactgccttg gcagtcggct ncataagagg caaggatgag 240
gctgagaggg acaaccacga agatgacact ggacacangc caactgtatc cattgttagga 300
ggnatctcca caggagagtn gaatcagaga tgggacnttc acattaanaa gttatttatn 360
tgctggcggg nacagatgcc caagcggnan gngntatgg tntcggncna ttnnttcgtc 420

```

canacccatt atctcangcc acatgtatnt cagcnttttna ntncnntnt nagtntagtc 480
 tngntgntnt ncnntattnn cenncttttn tccntcann tatcattntc attccttnen 540
 ncnanantt atggnnncnc cgnacncnc cngtnactcc cctnnngncg 590

<210> 134
 <211> 655
 <212> DNA
 <213> Homo sapiens

<220>
 <221> variation
 <222> 2-3, 5-11, 17485, 506, 512, 514, 518, 525, 543, 578, 590-592, 602, 609,
 612, 616, 637, 646

<223> n = any nucleotide

<400> 134
 gnntnnnnnn ntgttancct cgtccctcta gatgcatgct cgagcggccg ccagtgtgat 60
 ggatatctgc agaattcgcc cttccgatgt atttatttct acacagacac agtgacaatc 120
 tgatctctct tgcctttccc cacacactgc aacctctgcc tccacattca agtgattctc 180
 ctgcctcagc ctcttgagta gctggaatta cagatgtgag ccaccatgcc tggcctgtcc 240
 agatgttttt gaaacaaccc ccaccagcac tggagggagt caaggggaaga caagccaggc 300
 atctgagctc ctctgtctct gcctttcctt ctactgtcc ccagggtaac ccgtcaccac 360
 ccccatcacg aaccccttca tctacacatt acgtaacaag ggcgaattcc agcacactgg 420
 cggccgttac tagtgatcc gagctcggtta ccaagcttga tgcatagctt gagtattcta 480
 acgntcacc taaatagctt ggcgtnatca tngncccnag cttgntttct gtgtgaaatt 540
 tgntatccgc tcacaaattc cacacaacat acgagccnga agcaataagn nntaaagcct 600
 gnggtgccna angagnagc taactcacia ttaattncgt tggctnactt gcccc 655

<210> 135
 <211> 639
 <212> DNA
 <213> Homo sapiens

<220>
 <221> variation
 <222> 4, 449, 480, 499, 510, 519, 524-525, 536, 543, 547, 550-551, 557-
 558, 564, 574, 581, 602, 615, 518, 621, 623, 627, 636, 639
 <223> n = any nucleotide

<400> 135
 ttngccctc tagatgcatg ctcgagcggc cgccagtgtg atggatatct gcagaattcg 60
 cccttcctat gtacttggtt ctaagcaacc tctccttctt ggagatttgg tataccacag 120
 cagcagtgcc caaagcaccg gccatcctac tggggagaag tcagaccata tcatttacia 180
 gctgtctttt gcagatgtac tttgttttct cattaggtg cacagagtac ttcctcctgg 240
 cagccatggc ttatgaccgc tgtcttgcca tctgctatcc tttacactac ggagccatca 300
 tgagtagcct gctctcagcg cagctggccc tgggctcctg ggtggtgtgg ttctgtggcc 360
 attgcagtgc ccacagccct catcagtggc ctgtccttct gtggttcccg tgccatcaaa 420
 cacttcttct gtgacattgc accctggant gccctggcct gcaccaacac cacaggcagn 480
 aagagcttgt ggcctttgng aatcgctgtn tggggctanc cttngtcat gccctnatca 540
 cctttntcn nctatgnngt acantcatta agcnccaatc nctcatggga tccccctttg 600
 cnagtggccc ggcgngcnaa ngncctnctc cccgtncen 639

<210> 136
 <211> 654
 <212> DNA
 <213> Homo sapiens

<220>

<221> variation

<222> 3, 108, 186, 216, 221, 252, 322, 329, 339, 344, 346, 350, 370, 376, 379, 385, 388, 391, 398-400, 404, 409, 418, 422, 428-429, 433, 437, 455-456, 462, 465, 474-476, 493, 496, 498, 503, 506, 515, 521, 527, 538, 540, 542, 548, 554, 561, 563, 565, 586, 595, 598, 612, 628, 639, 646

<223> n = any nucleotide

<400> 136

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tgnccctcta gatgcatgct cgagcggcgc ccagtgtgat ggatatctgc agaattcgcc 60
cttccgatgt atttgtttct agccaacctg tcattaactg atgcttgntt cacttctgcc 120
tccatcccca aaatgctggc caacattcat acccagagtc agatcatctc gtattctggg 180
tgtctngcac agctatatatt cctccttatg tttggnggcc ntgacaactg cctgctggct 240
gtgatgccat angaccgtta tgtggccatt tgccaaccac cccattacag cacatctatg 300
agtcgccagc tctgtgcaact antgctgcnc gtgtgctgng tgcnanccan ttgtctgcct 360
gctgcacatn ctgttncenc cccnccnggg nctctttnnn ccgnaccenc cctacaantc 420
cntatcannt tengetnecc tttcttctcc ccccnnttct tncnccttc ctcnnccta 480
ctttcttctc tcnctnctnct canatnatca gtccnacctc nccttcnttt cttcactnan 540
tntctctnct cccnctcacc ngntngtcta gtctgccgtc gccccntcgc tatcncncc 600
ccccctcccg cntccctga tegtctngt ctaccctcnc catctnatcc ctcc 654

```

<210> 137

<211> 658

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 334, 346, 350, 352, 357, 360, 369, 376-379, 389, 394, 397, 400, 401-402, 411, 414, 421, 435, 438, 447-449, 460, 466-467, 474, 476, 480, 486, 500, 504, 510, 512-513, 515, 517, 521, 525, 528, 543, 551, 554-555, 557, 559, 569-570, 572-573, 585, 587, 591, 593-594, 600-601, 606-607, 612, 615, 617, 621, 623, 628-629, 631, 633, 636-637, 640, 655

<223> n = any nucleotide

<400> 137

```

ctctagatgc atgctcgagc ggccgccagt gtgatggata tctgcagaat tcgcccttcc 60
aatgtatttt tttctaagca acctctcctt cctggagatt tggatatacca cagcagcagt 120
gcccaaagca ctggccatcc cactggggag aagtcagacc atatcattta caagctgtct 180
tttgcatatg tactttgttt tctcattagg ctgcacagag tacttcctcc tggcagccat 240
ggcttatgac cgctgtcttg ccatctgcta tcctttacac tacggagcca tcatgagtag 300
cctgctctca gcgcagctgg ccctgggctc ctggncgtgn ggcttngtgn cnttgngcn 360
ctcctagcnc tcatgnnnnc cttgccttnt gggncntgn nnatcacctc nttncctctg 420
nacacttgta cctcncgnet tgccctnnnc tgcttctaan tccctnngtt gtantnecnt 480
gccttntctc ccttctgetn gttnatcttn annntcncgtc ntctntgncc ctctcctteg 540
ttngacccct ntannncnc tcttctctnn annccccctc tatcncnccg ntncnctecn 600
ntgtcnnccg antangntac ntntcannnt ntntcnnctn ctctcctaac tcttncgg 658

```

<210> 138

<211> 670

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 342, 347, 358, 376, 383, 401, 403, 409, 448, 451, 455, 463, 470, 474, 478, 481-482, 484, 487, 489-490, 492, 499, 511, 514, 516, 518, 522, 525, 534,

536, 548, 556, 565, 577, 581, 585, 587, 589, 592, 598, 604, 607-609, 624-626,
628, 636, 639, 645, 651, 655, 660, 661-663, 667-668
<223> n = any nucleotide

<400> 138

```
ggccccctag atgcatgctc gagcgggcgc cagcgtgatg gatattctgca gaattcgccc 60
ttcccatgta tttgtttcta agcaacctct ccttcctgga gatttggtat accacagcag 120
cagtgcceaa agcactggcc atcctactgg ggagaagtca gaccatatca tttaacaagt 180
gtcttttgca gatgtacttt gttttctcat taggctgcac agagtacttc ctctggcag 240
ccatggctta tgaccgctgt cttgccatct gctatccttt acactacgga gccatcatga 300
gtagcctgct ctacgcgcag ctggccctgg gctcctgggt gngtggnntc gtggcoantg 360
tagtgcceac agccentatc agnggcctgt ccttttggtg ncnccegtnc catcaacccc 420
ttctttctgt gacatttgcc cccctgcntt nccntggcc ctnccecaan cacngcangg 480
nngnttncnn gnctcggcnc cccctttgac ntantncntt gntgngcgt tatnctgcg 540
tttaatgnc ttaatnaaac tctcncctct catgttnttc nttntntng gnaccaantc 600
ttcnaannna ccttttttc catnnncng tctacntcnc tctcnccttc ntcngttn 660
nngtcnnc 670
```

<210> 139

<211> 635

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 303, 314, 331, 339, 341, 360, 373, 379, 386, 395, 400, 406, 416, 419,
423, 433, 435, 452, 456, 463, 473, 480-481, 487, 490, 493, 499, 501, 504-505,
509, 511, 514, 517, 519, 522, 523, 534, 535, 543, 544, 554, 560, 563, 565,
567, 579, 584, 593, 596-597, 599, 605-608, 611-612, 619-620, 624, 632, 634
<223> n = any nucleotide

<400> 139

```
gatgcatgct cgagcggcgc ccagtgtgat ggatatctgc agaattcgcc cttccgatgt 60
atTTTTTTct aagcaacctc tccttcctgg agatttggtg taccacagca gcagtgcceca 120
aagcactggc catcctactg gggagaagtc agaccatata atttacaagc tgtcttttgc 180
agatgtactt tgttttctca ttaggetgca cagagtactt cctcttgga gccatggctt 240
atgaccgctg cttgccatct gctatccttt acactacgga gccatcatga gtagcctgct 300
ctnagcgcag ctgnccctggg ctctgggtg ngtggttcng ngccattcag cgccacagn 360
cttcatcagt ggnettgtn tctgngccc ccgncatcn aaccantttc ttctgngana 420
atngtacccc tgnanttgcc ctggccttgt anccancaca tangctcgta tngcttctn 480
ntggccnccn tgnttegent ngtnccgng ntancngnc tnnacgtcct ttcnnacact 540
ttnnctctat gttntcaacn tcnngncta ttcgtcang atanccactc ttcnancnt 600
cggannnnta nctttccnn acctcttctc cntnc 635
```

<210> 140

<211> 709

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 357, 369, 379, 382, 414, 430, 441, 458, 462, 468, 474, 481, 486, 494,
505, 507-509, 514, 520, 533, 546, 551, 555-556, 563, 570, 574, 589, 600, 602,
606, 613, 615-616, 622-623, 628, 638, 644, 653, 669, 671, 677, 679, 680-681,
689, 691, 696-698
<223> n = any nucleotide

<400> 140

```
atgaccctct agatgcatgc tcgagcggcc gccagtgtga tggatatctg cagaattcgc 60
```

```

ccttccctatg tatttatttc taagcaacct ctccttcctg gagatttggg tataccacag 120
cagcagtgcc caaagcactg ggccatccta ctggggagaa gtcagaccat atcatttaca 180
agctgtcttt tgcagatgta ctttgttttc tcattaggct gcacagagta cttcctcctg 240
gcagccatgg cttatgaccg ctgtcttgcc atctgctatc ctttacacta cggagccatc 300
atgagtagcc tgctctcagc gcaagctggc ctgggctcct gggtgtgtgg ttccgngggc 360
cattgcagng cccacagcnc tnatcagtgg gctgtccttt ctgtgggccc ccgngcccat 420
tcaacccacn tttctttttg nggatattgg caaccccntg gnatttgncc cctnggccct 480
ngcacncaaa ccancaccag ggtcngnnna caanctttgn cgggccccct ttntgaaatt 540
ggcctnggtg ngggnnntaat tcnctttggn tttnaatgcc cttccaatna acctttttgn 600
cnttentatg ggngnnccct tnnattcnag caccacancc ttanggggaa ccnccttttt 660
gtcaagtngn nccggtgnnn naaaagccnt ntccnnntg cccccccg 709

```

<210> 141

<211> 671

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 1, 18, 368, 374, 375, 386, 392, 404, 405, 414-415, 420-422, 445-446, 449-450, 452, 460, 467-468, 471, 484, 488, 490, 512, 514, 531, 536-537, 541-542, 549, 562, 568, 572, 574-575, 577, 585, 588, 592-593, 595, 599, 617, 619, 627, 636, 639, 647, 658-659, 661-662, 665-667, 669

<223> n = any nucleotide

<400> 141

```

ntggggccctg agatgcangc tcgagcggcc gccagtgtga tggatatctg cagaattcgc 60
ccttccccatg tatttttttc taagcaacct ctccttcctg gagatttggg ataccacagc 120
agcagtggcc aaagcactgg ccatacctact ggggagaagt cagaccatat catttacaag 180
ctgtcttttg cagatgtact ttgttttttc attaggctgc acagagtact tcctcctggc 240
agccatggct tatgatcgct gtcttgccat ctgctatcct ttacactacg gagccatcat 300
gagtagcctg ctctcagcgc agctggccct gggctcctgg gtctgtgggt tcgtggccat 360
tgaagtgncc acanngcctc atcagntggc cntgtccttc tgcnnccccc cgtnnccattn 420
nncacttctt tcgtgacatt gccannctnn tnttgccctn gtcctttncc natcatccat 480
ggcngttngn gctgttggcc ctttcgctca cncngctgc gccattctc nctgtnncaa 540
nngcctcctt ctactctctg cnttctanct antnnccct ctttncctnc tnnantctnt 600
cctcgatctc ctttcangnc tccgctncac tgctcncna acgtccnttt ctccctnnt 660
ntcnnntnc g 671

```

<210> 142

<211> 739

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 5-6, 23, 232, 235, 349, 353, 358, 374, 397, 400, 406, 423-424, 427, 431, 434, 436-437, 440, 445, 448, 450, 452, 467, 471, 477, 488-489, 497-498, 506, 510-512, 518-520, 525, 528, 547, 550, 557-558, 560, 562-563, 566, 569, 590-591, 604-605, 613, 619, 631, 638-639, 642, 646, 649-650, 654, 660-661, 664, 670, 677, 679, 687, 690, 692, 694-695, 701, 714, 716, 722, 725, 731, 739

<223> n = any nucleotide

<400> 142

```

gggcnncttt gggatatgct tgncccttag atgcatgctc gagcggccgc cagtgtgatg 60
gatattctgca gaattcgccc ttccaatgta cttatttcta gccaacctgt cattaactga 120
tgccctgtttc acttctgctt ccattcccaa aatgctggcc aacattcata cccagagtca 180
gatcatctcg tattctgggt gtcttgacac gctatatttc ctccttatgt tngngggcct 240

```

```

tgacaactgc ctgctggctg tgatggcata tgaccgctat gtggccatct gccaaaccact 300
ccattacagc acatctatga gtccccagct ctgtgcacta atgctgtgng tgnctgtngt 360
gctaaccaac tggmctgccc tgatgcacac actgttncn atccnngcgc tttcttggtc 420
ccnntangcc nctnctnctn ttcctntntn tntctctacc tctccntcg ngctctnccc 480
cttccccnnt ctctctnntg tactenctan nctgttnnn cccctntntt ctctctcttc 540
ttctctntcn ctctctnntn tnttntctnc tcttgctcct acctgtcccn ntcatacctt 600
ttcnnaatcg ctncctatcnc cgcctatagt ncaattcnnc tncctnctnn attnctctacn 660
ncctctctcn ccatcantnc taacctnctn cntnntctct ntctctgtcc tcancntctc 720
gnccnatttc nttttcccn 739

```

<210> 143

<211> 611

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 497, 528, 536, 540, 543, 551, 557, 563, 565, 570, 582, 589, 600, 605

<223> n = any nucleotide

<400> 143

```

gatgcatgct cgagcgggccc ccagtgtgat ggatatctgc agaattcgcc cttgatagat 60
aattgggttc agcatggggg tcaccacagt gtacatcata gccatgacag tgccttttag 120
agtagaacta ttagctgatg agcataagta gagaccaata acggttccat agaacagtga 180
caccacagac aggtggggagc cacaagtaga gaaggccttg cagataccct tagaagaagg 240
gaccttgagg atggaggaga caattcttgc ataggacca aggatgagta ggaatgggat 300
gacaagaatg agccctccca tgataaatat caccattca ttaactcgag tgcagagaa 360
ggccagcttc agcagagcag acatatcaca gaaaaagtgg gggatcacat tgtctgcaca 420
aaaacacaac ctggccatga gtaaagtgtg taacatggca tggaaggtgg tcagcaccca 480
ggacagcgcc accaggncga gacagagcat ggggctcatg atggcgnggt agtgcngggg 540
gangcagatg nccacantag tgnatnagn ccatgggtcac angggaggna gctttcaggg 600
ctttnaataa c 611

```

<210> 144

<211> 641

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 242, 263, 289, 315, 353, 357, 360, 372, 376, 385, 392, 397, 407, 416, 420, 422, 425, 429, 431, 433, 439, 446-449, 454, 465-466, 471, 479, 485, 492, 499, 501, 512, 516, 524, 528-529, 532, 534, 539, 543, 545, 547, 549, 561, 563, 565, 572-573, 575, 578, 582, 584-586, 596, 602, 604, 613, 615, 617, 622, 627-628, 632, 636-637, 639

<223> n = any nucleotide

<400> 144

```

gcgtgctcga gcggccgcca gtgtgatgga tatctgcaga attcgccctt gttgcgcaaa 60
gagtacatga aggggttaag tgaaggagtg cccactgcat agaagagacc aaagaacttg 120
cccctccctt gggcatacgg atttttgggc tggaggtaga cagcaatgac tgagctgtag 180
aagagggtga ccacagttag atgggaggag cagggtccaa aggcctttct ccatgctgtg 240
gnagagttaa tcctcagcac tgnctgggca gtggctccat aagaggcang gatgaggctg 300
agaggcacia ccacngaaga tgacactgta cacagccaac tgtattttat tgnaggnggn 360
atctccacag gngagnccaa tcagntgatg gntccnccc atttcanaag tcnctntatn 420
tntntttgnc ngncacgang gtctnnnnng agcngttctt gtccnntctt nactatcgnt 480
taccttccct cntccctent nttttcttct cncctnctc ttctntttnnc cntntccent 540
gtncnctnt atcttcccta ntncntcttt tntnctntt tngnnncett cctctntctt 600
tntntccctc tcnantat cnettgnncc cncennntnc c 641

```

<210> 145
 <211> 837
 <212> DNA
 <213> Homo sapiens

<220>

<221> variation

<222> 8-9, 12, 330, 350, 364, 367, 387, 390-391, 393-395, 398, 399-400, 403, 406, 409, 411, 413, 416, 428-429, 438, 449, 454, 464-465, 475, 481, 486, 488, 492, 500-501, 504, 506-507, 515, 523, 532, 538, 548, 556, 562, 565, 567, 573-575, 578, 582-583, 589, 592, 598, 599-600, 604, 608, 612, 629, 637-639, 643, 645, 647, 652, 663, 666, 668, 672, 679, 686-687, 689-690, 693, 699, 710, 715, 717, 719, 721-722, 724, 732-734, 748-751, 763-764, 772-773, 780, 783, 791, 811, 818, 828, 834, 836
 <223> n = any nucleotide

<400> 145

```

ggttgccnnc gnttaggcac tgggcectct agatgcatgc tcgagcggcc gccagtgtga 60
tggatatctg cagaattcgc ccttccgatg tatttgtttc taagcaacct ctccctcctg 120
gagatttggt ataccacagc agcagtgcgc aaagcactgg ccatacctact ggggagaagt 180
cagaccatat catttacaag ctgtcttttg cagatgtact ttgttttctc attaggctgc 240
acagagtact tcctcctggc agccatggct tatgaccgct gtcttgccat cctgctatcc 300
tttacctac ggagccatca tgagtagecn tgctctcagc tgcagctggc cctgggctcc 360
tggntgngct ggtttctcgc cctattnttn ncnnnacnnn cctantcng ncnctnctct 420
ctttcttntt tccctttnc tcaactcatc ctctctctct tttntgtgcc tcttnataac 480
nttgtntntc gnttctccn ntentnnctt ctctnttget tcnctctcct cntttcgnat 540
ccctttgntc tctacnctct tncgnantca cttnnatntc tnttcacng cntcctcnnn 600
gatnttcncc tncctactgc tactctctnc tatactnnnc ttntntncat anttcgtctg 660
ctnancantc tntcactent tcccanncn tcnctgtcnt ctgactcten cctentntnt 720
nntnctcac cnntacatg gtccctnnn ntccatctcg tcnntctctc cnntatacgn 780
ttncatactc nctaacttct ctccatcatc ntcacctntc tttctttntc cctngnc 837

```

<210> 146
 <211> 639
 <212> DNA
 <213> Homo sapiens

<220>

<221> variation

<222> 16, 340, 379, 394, 401, 425, 428, 433, 435, 437-438, 446, 457, 463-464, 487, 504-505, 508, 510-511, 517-518, 529, 542, 546-547, 549-550, 552-553, 555, 561, 567, 569, 573, 576, 582, 584-586, 590, 594, 597, 599-600, 604, 611, 618, 623, 631, 634, 636

<223> n = any nucleotide

<400> 146

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gatgatgctc gagcgnegca gtgtgatgga tatctgcaga attcgccctt ccaatgtatt 60
tatttctagg caccactgac ttcttctct tggcgcgtcat gtctctggat cgttacctgg 120
caatctgccg accactccgc tatgagacct tgatgaatgg ccagtgtctgt tcccaactag 180
tgctggcctc ctggctagct ggattcctct gggctccttg cccactgtc ctcatggcca 240
gcctgccttt ctgtggcccc aatgggtattg accacttctt tcgtgacagt tggcccttgc 300
tcaggcttct ttgtggggac acccacctgc tgaaactggg ggctttcatg ctctctacgt 360
tggtgggtact gggcccacng gctctgacct cagntttcta ngcccgcatt cttgccactg 420
ttctnagngc ccnncanngc ttgcngagc gaagcanaag atnnttttca cattgcgcac 480
tcggaantta aaggggggtgg cgcnnncan nctgggnngc ttcatctctnt ctttttactt 540
tnccannngn tnntngctca ntccctntnc tentencaat cntnnnggcn ctentgntnn 600
gtanactgcc nttaattnga ccnctttccc nacnncac 639

```

<210> 147

<211> 618

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 347, 411, 415, 418, 435, 441-442, 445, 451, 466, 482, 506, 508, 513, 515-516, 526-527, 531-532, 534, 536, 552, 561, 564; 571; 574, 581, 583, 586-588, 591-592, 616

<223> n = any nucleotide

<400> 147

```

catagatgca tgctcgagcg gccgcagtgt gatggatata tgcagaattc gcccttccga 60
tgtaagttct ttctaggcac cactgacttc ttctcttgg ccgtcatgtc tctggatcgt 120
tacctggcaa tctgccgacc actccgctat gagaccctga tgaatggcca tgtctgttcc 180
caactagtgc tggcctcctg gctagctgga ttctcttggg tcttttggcc cactgtcctc 240
atggccagcc tgcctttctg tggccccaat ggtattgacc acttctttcg tgacagttgg 300
cccttgctca ggctttcttg tggggacacc cacctgctga aactggnggc ttcatgtctc 360
tctacgttgg tggtactggg ctactggct ctgacctcag nttcttange ctgcattctt 420
gtcactgtct caggncctt nnagmtgctg ngcgaaggaa agcgcnttcc acttgcgctc 480
cnatcttaca ggggtggcat catctnangg ggngnntgca tctttncta nntnncagg 540
tcccagctat antccaaagt nctnaaaaca ngancctcgg nangannnct nntattctac 600
ccttcttctg aacctncc 618

```

<210> 148

<211> 633

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 2, 11, 33-34, 36, 38, 346, 352, 370, 406, 412, 414, 417, 420, 423-424, 427, 434, 437, 440, 449, 452-453, 474-475, 477, 486-487, 491, 496, 499-500, 505-506, 515, 517-518, 533, 535, 537, 540, 543, 547, 549, 556, 558, 563, 568, 570, 571, 575, 577, 580, 588, 590, 593-594, 598, 607, 612, 623, 626

<223> n = any nucleotide

<400> 148

```

cntagatgca ngctcgagcg ggccgagcg tgnngnanat ctgcagaatt cgcccttcca 60
atgtattttt tctcactaac ttgtctttcc tagatctctg cttcaccacc agttctatcc 120
cccagctgct tttcaatcta ggcagcccag gcaagactat cagccacacg ggctgtgcca 180
tccagctctt catgttctct ggcctgggtg gcaagagtgt attctcttgg cagccgtggc 240
ctatgaccgc ttcattgcaa tctgcaagcc cttcactat tctgtcatta tgcacctca 300
gctgtgctgg aagttggtgt ctgtggcccc ggggtgttgg actccnccagt tntctaggta 360
tgccctctgn gactatgaag cttgtcacga tgcggaagat gtaagnttgc ancnttnccn 420
ttntngnat gccngctcn tataaaaanc annctgggcg ggacacagt cttngnata 480
gcattnngtc ncttnatnn catcnnattt gcctngnngt cctcgttcc cantntncan 540
tcntctntng gcttancntt ctncaccngn ncttntntan ctactcctn ttnntctntc 600
cttctanctc tncatcttcc ttncntcca tcc 633

```

<210> 149

<211> 624

<212> DNA

<213> Homo sapiens

<220>
 <221> variation
 <222> 433, 456, 511, 513, 516, 533, 541, 543-544, 557-558, 561-562, 567, 573, 582, 597, 604, 606, 609, 617, 619
 <223> n = any nucleotide

<400> 149
 gatgcatgct cgagcggccg ccagtgtgat ggatatctgc agaattcgcc cttgttccta 60
 agactataca tgaatgggtt tagcatcggg ttgaaagaac tgtaaaatag aaaaaggacc 120
 ttctgtctgct cctcaggatg gcgggactta ggggccatgt acatgacgat ggcgctgcc 180
 aagaagagtc ccactacgca gaggtgggag gagcaggtgg agaaggcctt tctgcggccc 240
 tccccagact ggatcctcag gatggccgcc aggatgtgtg agtaggagac cagcaccagg 300
 cagagtggtc ccaccaggat gaacatgcag gctgcaaaga tgaccacctg gttgagccag 360
 gtatcagcac aggccagcct gaggacagac aggatttcac aagaagaagt gggtgatttc 420
 acgaggccca canaaagggc agtcttagga tgaggntcac atggaccata gccaggaggg 480
 agccacattg tcccaggaag ngntgnccag agtgatgcag acttttcagg tcntgatgat 540
 ngnnttattc ggagagnntg nnagacnggt cancgttccc gntcgtagga caattanac 600
 ccancngng ccttcantna tgtc 624

<210> 150
 <211> 611
 <212> DNA
 <213> Homo sapiens

<220>
 <221> variation
 <222> 449, 480, 506, 555, 578-579, 601, 608, 610-611
 <223> n = any nucleotide

<400> 150
 gatgcatgct cgagcggccg ccagtgtgat ggatatctgc agaattcgcc cttccaatgt 60
 atttatttct ctctgacctc tccttcttgg acctctgctt taccacaagt tgtgtcccc 120
 agatgctggg caacctctgg ggcccaaaga agaccatcag cttcctggga tgctctgtcc 180
 agctcttcat cttcctgtcc ctggggacca ctgagtgcac cctcctgaca gtgatggcct 240
 ttgaccgata cgtggctgtc tgccagcccc tccactatgc caccatcatc ccccccgcc 300
 tgtgctggca gctggcatct gtggcctggg ttatgagtct ggttcaatcg atagtccaga 360
 catcatccac cctccacttg ccttctgtc cccaccagca gatagatgac tttttatgtg 420
 aggtcccatc tctgattcga ctctcctgng gagatacctc ctacaatgaa atccagttgn 480
 ctgtgtccag tgtcatcttt ggtggntgtg cctctcagcc tcateccttg ctcttatgga 540
 gccactgccc aggcnggggc tgaggattaa ctttgccnna gccatggaag aaaggctctt 600
 nggacctngn n 611

<210> 151
 <211> 619
 <212> DNA
 <213> Homo sapiens

<220>
 <221> variation
 <222> 415, 417, 427, 516, 524, 536, 544-545, 558, 561, 575, 580, 582, 584, 590, 607, 610, 615
 <223> n = any nucleotide

<400> 151
 gatgcatgct cgagcggccg ccagtgtgat ggatatctgc agaattcgcc ctttctttat 60
 ttgcaagagt atacactagt ggattgaaga gaaacaaata cataggaagg gcgaattcca 120
 gcacactggc ggccgttact agtggatccg agctcggtac caagcttgat gcatagcttg 180
 agtattctaa cgcgtcacct aaatagcttg gcgtaatcat ggtcatagct gtttctctgtg 240
 tgaaattgtt atccgctcac aattccacac aacatacgag ccggaagcat aaagtgtaaa 300

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gacctggggtg cctaatagagt gagctaactc acattaattg cgttgcgctc actgtccgct 360
ttccagtcgg gaaacctgtc gtgccagctg cattaatgaa tcggccaacg gcgngnaga 420
ggccggnnttg cgtattgggc gctcttcgcg ttctcgctca ctgactcgct gcgctcgga 480
cgtccggctg cggcgagcgg tatcagctta ctcaanggcc gtantacggt tattcncagg 540
aatnnggggt taacgccngg naaagaacat tgtgngccan angncaagcn taatgccag 600
gaaccgntan aacgntccc
619

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<210> 152
 <211> 959
 <212> DNA
 <213> Homo sapiens

<220>
 <221> variation
 <222> 139, 203, 209, 211-213, 216, 221, 225, 234, 243, 245, 248, 253, 255,
 261, 277-279, 287, 296, 302, 311, 318, 321, 344, 348, 350, 353, 376, 379,
 381, 383, 395, 397, 402, 406-407, 414, 420, 429, 436, 438, 448, 450, 452,
 463, 476, 481, 483, 496, 499, 502, 517, 520, 523, 527, 530, 535, 537, 539,
 542, 549, 550, 558, 570, 571, 579, 580, 584, 587, 596, 605, 609, 634-635,
 637-638, 640, 644, 648-649, 663, 665-666, 671, 675, 677, 681, 692, 699, 705,
 715, 718, 721, 736, 745, 750, 758, 766, 778-779, 791, 793, 797, 811, 816,
 821, 829, 831, 832, 837, 839, 840, 843, 846, 846, 851, 858, 883, 889, 892,
 895, 897, 898, 917, 923, 928, 935, 945, 956
 <223> n = any nucleotide

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<400> 152
ctcgagcggc gcagtgtgat ggatatctgc agaattcgcc ctccctatgt attatttctc 60
cataatttat ctattgccga tatctgcttc tcttccatca cagcgcccaa ggttctggcg 120
gaccttctgt ctgaaagana gaccatctcc ttcaatcatt gctccactca gatgtttcta 180
ttccacctta ttggaggggc ggntgtatnt nnnccntggt ncccnatgcg cctncttttc 240
ccntntctnt tcnantcttt ncgcctcttc tcatgcnnc ccttcctctt tattctgttc 300
gnaatacgtc ntctccgntc nctgtctgct catccttgct gttncgtntn canctcatcg 360
ctgtctgtcg tacctnttnc ntntctgtgc tgcgngntca tncacnntct caancgtctn 420
ccctcactnc tcttntctnt ctctctntn cncctgtgtc tancttcttg cctgntacg 480
ncncccgct catatncgng tctgtgtatc cctctnntn ttntctntcn cctctnttnc 540
ctctcacnn acttctnct ctctctccan ncttcgacnn ctctctnct tccacnacgc 600
acttntctnt ctatatccgc tcttaccgct cctcnncnnan cacncttnc tctgcatac 660
agntntcttc ncaacnctat nttcttctta cnetctctnc tgtcncacag atctntctnt 720
nctctgtctc cgttgntccc cctgncactn cgcaatcnca catatncgtc tctctctnt 780
cgccacttat ntngcanctt tctctgctgt nctctnctat ntccctcnc nntctcnctn 840
ctnatnctcg nttattcnaa tcaactcgc tactgtttct gtntcttnt cntgncnct 900
agcttctctc tattcantct acnttctnt cgtntctat ccacnctctt cactnctt 959

```

<210> 153
 <211> 375
 <212> DNA
 <213> Unknown (H38g1 nucleotide)

<220>
 <223> Synthetic construct

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<400> 153
ttggcctgtg ctgacacatc cttagccag aggggtgagct tccccgacgt tggcctcata 60
tctcttctgt gctttctgct aattctttta tctacacta gaatcacaat atctatctta 120
agcattcgta caactgaggg ccgtcgccgt gccttctcca cctgcagtgc tcaacctatt 180
gccatcctct gtgctatgg gccatcatc actgtctacc tgcagccac acccaacccc 240
atgctgggaa ccgtgggtaca aattctcatg aatctggtag gaccaatgct gaaccctttg 300
atctatacct tgaggaataa ggaagtaaaa acagccctga aaacaatatt gcacaggaca 360
ggccatgttc ctgag
375

```

<210> 154
 <211> 965
 <212> DNA
 <213> Unknown (H38g2 nucleotide)

<220>
 <223> Synthetic construct

<400> 154
 cacacagagc cacggaatct cacagatgtc tgagaattcc tcctcctggg actctcagag 60
 gatccagaac tgcaaccggc cctcgctttg ctctccctgt cctgtccat gtatctgggc 120
 acggtgatga ggaacctgct cagcatcctg actgtcagct ctgtctctcc cctccacacc 180
 cccatgtact tcttcctctc caactctgtc tgggctgaca tcggtttcac ctcgccacag 240
 gtccccacga tgatttgtga catgcagtcg catagcagag tcatccctca tgcgggctgc 300
 ctgacgcaga tgtattttctt ggtctttttt gcatgtatag aaggcatgct cctgactgtg 360
 atggcctatg actgctttgt agccatctgt cgccctctgc actaccagct catcgtgaat 420
 cctcacctct gtgtcttctt cgttttggtg tccttttttc ttagcctgtt ggattcccag 480
 ctgcacagtt gaatttgtgtt acaattcaac tcatcaaga atgtggaaat ctctaatttt 540
 gtctgtgacc cctctcaact tctcaaactt gcctgttctg acagcgtcat caatatcatt 600
 ttcatatatt tcgatagtac tatgtttgct tttcttccca tttcagggat cctatggctt 660
 actataaaat cgtccctctc attctaagga tttcatcgtc agatgggaag tataaatcct 720
 tctccacctg tgccctctcac ctacgagttg tttgtgtgatt tgatggaaac ggcattggca 780
 tgtacctgac ttcagctgtg tcaccacccc ccaggaatgg tgtgggtggc tcatgtatgt 840
 acgctgtggt caccctccatg ctgaaccttt tcatctatag cctgagaaac aggaacatac 900
 aaagtgccct gcggaggctg cgcagcagaa cagtcgaatc tcatgatctg ttccatcgtt 960
 tttct 965

<210> 155
 <211> 936
 <212> DNA
 <213> Unknown (H38g3 nucleotide)

<220>
 <223> Synthetic construct

<400> 155
 atggatggag ataaccagag tgagaactca cagttccttc tcctggggat ctacagagagt 60
 cctgagcagc agcggatcct gttttggatg ttctgttcca tgtacctggt cacggtgctg 120
 ggaaatgtgc tcatcactct ggccatcagc tctgattccc acctgcacac ccccatgtac 180
 ttcttcctgg ccaacctctc cttactgac ctcttctttg tcaccaacac aatccccaag 240
 atgctgggtga acttcagtc ccagaacaaa gccatctcct atgcagggtg tctgacacag 300
 ctctacttcc tgggtctcctt ggtgacctg gacaacctca tcctggccgt gatggcgat 360
 gategetatg tggccacctg ctgccccctc cactatgtca cagccatgag ccctgggctc 420
 tgtgtcttgc tcctctcctt gtgttggggg ctgtctgttc tctatggcct cctcctcacc 480
 ttctccttga ccagggtgac cttctgtggg cctcgagaga tccactacct cttctgtgac 540
 atgtacatcc tgctgtggct ggcatgttcc aacaccaca tcattcacac agcgttgatt 600
 gccactggct gcttcatctt cctcaccctc ttaggggtca tgaccacatc ctatgtacgt 660
 attgtcagaa ccactcttca aatgccctcg gcctctaaga aatacaaaac cttctctacc 720
 tgtgcctccc atttgggtgt ggtctccctc ttttatggga cgcttgctat ggtgtacctg 780
 cagccctccc atacctactc catgaaggac tcagtagcca cagtgatgta tgctgtgctg 840
 acacctatga tgaacctttt catctacagg ctgaggaaca aagacatgca tggggctccg 900
 ggaagagtcc tatggagacc ctttcagagg cctaaa 936

<210> 156
 <211> 914
 <212> DNA
 <213> Unknown (H38g4 nucleotide)

<220>
 <223> Synthetic construct

<400> 156

atgaggaatc	acacattgct	gaatgaattc	attctacggg	gaataacctca	gacagagggga	60
ctggaggctg	tactctgtgc	tgtcttctca	ttcatctacc	tcttcacct	acttggaat	120
ttactcatcc	ttatagcgat	tgtttcttca	cactcctatg	tatttcttct	tgggacgcct	180
gtctactttt	gacatattgt	tcccatctgt	aacatgtccc	aagatgctat	tgtatctctc	240
tggccagagc	ccagtcattt	cttttaaggg	atgtgcttca	cagctcttct	tctatcagtt	300
gctgggttct	gctgaaggct	gcctctatc	tgtgatgtct	tatgatcgct	ttgttgccat	360
acatcacaca	ctgagatata	tgtcatcat	gaagcctgga	gtctgtgtcg	gcttggtcgt	420
ggtgccgggt	tgggtgggttg	tcttcacgcc	accattctga	cctcctttac	ctttcagttg	480
tctactgtg	gccccaatca	ggtggactac	ttcttctgtg	acattcctgc	tgtttfacc	540
ctggcttcta	ctgacagtgc	cctggcccag	aggggtgggtt	ccataaatgt	tggctttctg	600
gctttaacac	ttttgatcag	tgtctgtgtc	tgtacacta	gcattgggat	tgccatcttg	660
agaatccgct	catcagaggg	caggcagaaa	gccttctcca	cctgcagtgc	tcaccttggt	720
gcaatcctct	gtgcctatgg	acctgtaatc	atcatctatc	tgaagtccac	acccaacccc	780
ttgcttggtg	ccaggtgcaa	atattaaata	atgttgtctc	acccatgctg	aactcgtaa	840
tctattcctt	aaggaacaag	gaagtgaana	ggtccctgaa	aagagtattc	tgaaatgttt	900
tacttactgt	ttgt					914

<210> 157

<211> 951

<212> DNA

<213> Unknown (H38g5 nucleotide)

<220>

<223> Synthetic construct

<400> 157

atgggaacag	ataaccagac	ttgggtgagt	gaattttattc	tctcggcct	gtccagtgac	60
tgggacactc	gggtctccct	gtttgtcctg	ttcttggtca	tgtatgtggt	gaccgtgctg	120
gggaactgtc	tcattgtcct	tctgatcaga	ctggacagcc	gactccacac	tcccatgtat	180
ttctttctca	ccaacctctc	ccttgctgat	gtctcctatg	ccacaagtgt	agtcctcag	240
ctgctggcac	atthttcttg	agaacataaa	gccatcccat	tccagagctg	tgcagcccag	300
ttatttttct	ccctggcctt	gggtgggatt	gagtttgttc	tcttggcggg	gatggcctat	360
gaccgctatg	tggctgtgtg	tgatgccctg	cgatactcgg	ccatcatgca	tggagggctg	420
tgtgctaggt	tggccatcac	atcctgggtc	agtggcttca	tcagctctcc	tgtgcagact	480
gctatcacct	ttcagctgcc	catgtgcaga	aacaagttaa	ttgatcacat	atcctgtgaa	540
ctcctagctg	tggctcaggct	ggcttgtgtg	gacacctcct	ccaatgaggt	caccatcatg	600
gtgtctagca	ttgttcttct	gatgacaccc	ttctgcctgg	ttcttttgtc	ctacatccag	660
atcatctcca	ccatcctaaa	gatccagtc	agagaaggaa	gaaagaaagc	tttccacacg	720
tgtgcctctc	acctcacagt	ggttgccctg	tgtatgggtg	tggccatttt	cacttacatc	780
cagccccact	ccagtccttc	tgtccttcag	gagaagttgt	tctctgtctt	ttatgccatt	840
ttaacaccaa	tgtgaaccc	catgatattac	agcctaagga	ataaagaggt	gaagggggcc	900
tggcagaaac	tattatggaa	attctctggt	ttaacatcaa	agctggcaac	t	951

<210> 158

<211> 1025

<212> DNA

<213> Unknown (H38g6 nucleotide)

<220>

<223> Synthetic construct

<400> 158

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gatccagaac	tgcagccggg	catcgctggg	ctgttcctgt	ccatgtgcct	ggtcacgggt	120
ctggagaaac	tgtcatcat	catggcagtc	agccctgact	tccacctcca	cacccccatg	180
tacttcttcc	tctccaacct	gtccttgctt	gacatcggtt	tcacctccac	acgggtcccca	240
agatgattgt	ggacatccag	tctcacagca	gagtcacttc	ctatgcaggc	tgcctgactc	300
agatgtctct	ctttgccatt	tttggaggca	tgggaagagag	acatgctcct	gagcgtgatg	360
gcctacgacc	agtttgtagc	catctgtcac	cctcccatat	cgttcagcca	tcttgaaccc	420

gtgtttctgt	ggcttccaag	atttgttgct	cctgtttttt	tttctttttt	tttttttttc	480
ctcaggcttt	tagactccca	gctgcataac	ttgattgcct	tacaaatgac	ctgcttcaag	540
gatgtggaaa	tttctaattg	cttctgggaa	ccttctcaac	tcccccatct	tgcattgttg	600
gacaccttca	ccaggaacat	caacctgtat	ttccctgctg	ccgtattggg	ttttcttccc	660
atctcgggga	cgctttttct	ttactgtaaa	attgtttcct	ccattctgag	ggtttcatca	720
tcagggtggga	agtataaacc	ttctccacct	gtgggtctca	cctgtctgct	gtttgctgat	780
tttatggaac	aggcgttgga	gggtatctcg	gttcagatgt	gtcatcttcc	ccgagaaaga	840
gtgcagtggc	ctcagtgatg	tatacgggtg	tcacccccat	gctgaacccc	ttcatctaca	900
gcctgagaaa	cagggatatg	aaaagtgtcc	tgcggcggcc	gcacagcagc	acgggtctaat	960
ctcaatatct	tcttatctgt	tccattcctt	ttgtagggtg	ggttaaaaaa	ggcagcaagg	1020
tcaaa						1025

<210> 159

<211> 936

<212> DNA

<213> Unknown (H38g7 nucleotide)

<220>

<223> Synthetic construct

<400> 159

atggtaaaag	gaaatcattc	cacggtgact	gaattttaatc	tcgctgggct	aacagacaaa	60
ccagagctcc	agctgcctct	tttctctctc	ttcctgggaa	tctatgtggg	cacagtgggtg	120
ggcaacctga	gcatgatcac	tctaataagg	ttcagttctc	acctgcacac	ccccatgtac	180
catttccctca	gcagtctgtc	cttcattgat	ctctgccagt	cttctgtcat	taccccaaaa	240
atgctgggtga	attttgtgtc	agagaggaat	attatctcct	acccagcatg	catgactcag	300
ctctactttct	tccttgttct	tgtcataatc	gaatgtcaca	tgttggtctgc	aatggcttat	360
gaccactaca	ttgccatatg	taaccactg	ctttaccatg	tcgccatgtc	ttatcagggtc	420
tgtctcctgga	tggtagtgtga	ggtgtattttt	atgggcttta	ttggtgctac	gtgctcacac	480
agtctgcatg	ctaagagtgc	ttttctgtaa	ggctgatgta	atcaaccatt	acttctgtga	540
tcttttccca	ctactggagc	tctcccgctc	cagtatttct	atcaatgaaa	tagtagtttg	600
tgcttcagtg	catttaatat	ccttttccgc	agcctcacca	tccttagctc	ttacatcttc	660
atcgttgcca	gcatectctg	cattcgctcc	actgagggca	gggtccaaaac	cttcagcact	720
tgcagctccc	acatctcggc	tgtttctgtt	ttctttgggt	ctgcagcatt	catgtacctg	780
cagccatcat	ccgtcagctc	catggaccag	gggagtgtct	tctgtgtttt	atgctactgt	840
tgtgcccatg	ctgaaccccc	aatctacagc	ctgaggaata	aagatgtcaa	agttgcctta	900
attaagttcc	ttgaaaaaag	aagtttcctg	tgaaga			936

<210> 160

<211> 985

<212> DNA

<213> Unknown (H38g8 nucleotide)

<220>

<223> Synthetic construct

<400> 160

atgggtcagg	aaaataaaaa	ccagacatgg	gtgagtgagt	tcattctgct	ggggatttcc	60
agtgattggg	gcattcaggt	atccctcttc	gccctgatcc	tggccatgta	tttggtgact	120
attttaggaa	acaccctcat	tcttcttctg	atcagactgg	acaacaggct	tcataccccc	180
atgtactttct	cccttagtgt	tctgtcattt	gtggactttt	gttatacaaa	gagtattgtc	240
ccacaaatgc	tgtcccaatt	gctctcagcc	cgaaagtcca	tcccattcta	cagttgtgtg	300
ctccagctct	atgtttctct	ggcatttgtg	gggtctgagt	tcttctgct	gggggccatg	360
gcctatgacc	gctacgtggc	cggtgtgccac	ccactgcact	acacggtcac	catgcatgga	420
gggctgtgcc	tggggctggc	ggccagccgc	ctgggtggctg	gcttctcaaa	ttccctgatg	480
gaaacaatta	tcaccttcca	gcttctctgtg	tcacgggtgtt	atcaatcact	ttgtctgtga	540
gaccttagca	gtgctacagc	tagcctgtgt	ggatgtcccc	ttcaacaagg	tcatgggtggc	600
catctcaggg	tttctggtga	tcttgccttc	ctgttccctg	gttctattct	cctatgcttg	660
catagttgcc	accattttgt	gcattcgttc	tacccaggta	cgctgcaaag	cctttggggac	720
ctgtgcctct	cacctcattg	tggtttgcat	gtgcttggg	gctaccatct	gcacctacct	780
ggggccacag	ttggcctcct	cagcagagga	agagaagatg	attgctctct	tctatggagt	840

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ggtgtcaccc atgttgaacc ccttgatcta cagcttgagg aataaggaag ttacgggtgc 900
tgtcgggaaa gttttagaaa gatgcagata aagggtcaag actctaagaa cctcttgta 960
tctatcatca aaaccaaaaa ggaga 985

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<210> 161

<211> 954

<212> DNA

<213> Unknown (H38g9 nucleotide)

<220>

<223> Synthetic construct

<400> 161

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atggacaaa gcaattatag ttctttacat gggtttatct tgcttggtt ctctaaccat 60
ccaaaaatgg agatgatcct gtcaggagtt gtcgccatct tctacttaac tacattgggtg 120
ggtaacacag ccattattct tgcatctctc ctggattccc agcttcatac accaatgtac 180
tttttccctca gaaatttata ttccctagat ctatgtttca caaccagcat catccctcag 240
atgctgggtca acttgtgggg acctgataag accatcagct atgtgggttg tatcatccaa 300
ctctatgttt acatgtgggt gggctcagtt gagtgccttc tctgggtgt tatgtcctat 360
gatcggttta cagctatatg taagcccttg cattattttg tagtcatgaa cccacatcta 420
tgtctaaaga tgattatcat gatctggagt attagtttgg ccaattctgt agtattatgt 480
acactcactc tgaatttgcc cacatgtgga aacaacattc tggatcattt ctgtgtgag 540
ttgccagctc tggtaagat agcttgtgta gacaccacaa cagttgaaat gtctgttttc 600
gctttaggca ttataattgt cctcacacct ctcatccta ttcttatate ctatggctac 660
attgccaaag ctgtgctgag aacgaagtca aaagcaagcc agcgaaaagc aatgaatacc 720
tgtggatctc atcttactgt agtgtctatg ttctatggaa ctattatcta catgtacctg 780
caaccaggta acagggcttc caaagaccag ggcaagttcc tcaccctctt ttacaccgtc 840
atcactccaa gtctcaaccc gctcatttac accttaagaa ataaggacat gaaggatgcc 900
ctgaagaaac tgatgagatt tcaccacaaa tctacaaaaa taaagaggaa ttgc 954

```

<210> 162

<211> 970

<212> DNA

<213> Unknown (H38g10 nucleotide)

<220>

<223> Synthetic construct

<400> 162

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cacacagagc cacggaatct cacagggtgc tgagaattcc tctcctggg actttcagag 60
gatccagagc tgcagtcggt cctcgctttg ctgtccctgt cctgtccac gtatctggcc 120
acgggtgctga ggaacgtgct caacatcctg gctgtcagct ctgactcccc cctccacacc 180
cccattgact tcttctctc caacctgtgc tgggctgaca tcggtttcc ctcggccacg 240
gttcccaaga tgattgtgga catgcagtcg tatagtagag tcatctctca tgagggtgc 300
ctcacacaga tgtctttctt ggctctttt gcattgtatag aaggcatgat cctgactgtg 360
atggcctatg actgctttgt agccatctgt cgccctctgc attaccagc catcgtgaat 420
cctcacctct gtgtctttt cgttttgggt tcttttttcc ttagcctgtt ggattcccag 480
ctgcacagtt gaattgtgtt acaattcaac atcatcaaga atgtggaaat ctctaatttt 540
gtctgtgacc cctctcaatt tctcaaaact gcctgttctg acagcgtcat caatagcata 600
ttcacgtatt tccatagtac tatgtttggg tttcttccca ttccaggga ccttttttct 660
taatttaaaa tcgtcacctt cattctctgg atttcatctt cagatgggaa gtataaagcc 720
ttctccacct gtgactctca cctagcagtt gttctgtgat tttatggaac aggcattggc 780
atgtacctga cttcagctgt gtcaccaccc ccaggaatgg tgtagtggcg tcaatgatgt 840
acgctgtggg caccctcatg ctgaacctt tcatctacag cctgagaaac agggacatac 900
aaagtgccct gcggaggctg ctacgcagaa cagtcgaatc tcatgatctg ttccatcggt 960
tttcttgtgt 970

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<210> 163

<211> 933

<212> DNA

<213> Unknown (H38g11 nucleotide)

<220>

<223> Synthetic construct

<400> 163

atggagttgg	agaaccagac	acgagtcacc	aagttcattc	tggtgggatt	ccctggggagc	60
ttgagtatgc	gggcagccat	gtttctgata	ttccttgtag	cctatattct	gacagtggct	120
gaaaacgtga	tcatcatcct	attggtgctg	caaaatcggc	cactgcacaa	gcctatgtac	180
ttcttcctgg	ccaacctgtc	cttcttgtag	acctgggtaca	tctctgtgac	tgtgcccgaag	240
ttactgttta	gtttttgggc	tgtgaacaac	agcatctctt	tcacactctg	tatgatacaa	300
ctgtacttct	tcattgctct	catgtgcaca	gaatgtgtgc	ttctggccgc	catggcctat	360
gaccgggatg	tggccatctg	tcgcccactc	cactacccaa	ccataatgag	ccatggggctc	420
tgtttccgcc	tcgctcttgg	ttcctggggc	attggctttg	gcatctccct	ggcgaagatc	480
tacttcatct	cctgcctcag	cttctgtggt	cccaatgtca	tcaaccactt	cttctgtgac	540
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atcctggcac	tggtcatctt	cctattccca	ctctttatta	ctgtcctgtc	ctacgggatgc	660
attctggcca	ccatattatg	catgcccaca	ggaaagcaga	aagcgttctc	cacttgtgac	720
tcccatcttg	tggtggtcac	cattttctat	tcagccatta	ttttcatgta	tgtctgacct	780
cgagttatcc	atgccttcaa	catgaacaaa	attatttcca	tcttctatgc	cattgtcact	840
ccttctctca	accctttcat	ttattgccta	agaaaccgag	aggccaagga	agctctgaag	900
aaactggcat	attgccaggc	cagcagatct	gac			933

<210> 164

<211> 939

<212> DNA

<213> Unknown (H38g12 nucleotide)

<220>

<223> Synthetic construct

<400> 164

atggagcaag	tcaataagac	tgtgggtgaga	gagttcgtcg	tcctcggtt	ctcatccctg	60
gccaggctgc	agcagctgct	ctttgttata	ttcctgctcc	tctacctgtt	cactctgggc	120
accaatgcaa	tcatcatttc	caccattgtg	ctggacagag	cccttcatac	tcccatgtac	180
ttcttccttg	ccatcccttc	ttgtcttgag	atttgctata	cctttgtcat	tgtacccaag	240
atgctgggtg	acctgctgtc	ccagaagaag	accatttctt	tcctgggctg	tgccatccaa	300
atgttttctt	tcctcttctt	tggtcctctt	cactccttcc	tgtctggcagc	catgggctat	360
gatcgctata	tggtccatctg	taacccactg	cgctactcag	tgtctcatggg	acatgggggtg	420
tgtatgggac	taatggctgc	tgccctgtgc	tgtggcttca	ctgtctccct	ggtcaccacc	480
tccttagtat	ttcatctgcc	cttccactcc	tccaaccagc	tccatcactt	cttctgtgac	540
atctcccttg	tccttaaact	ggcatctcag	cactccggct	tcagtcatgct	ggtcataattc	600
atgcttggtg	tatttgctct	ggtcatttct	ctgctactta	tcctagtctc	ctacatccgc	660
atcatctctg	ccattctaaa	aatcccttcc	tccgttggaa	gatacaagac	cttctccacc	720
tgtgcctccc	atctcattgt	ggtaactgtt	cactacagtt	gtgcctcttt	catctactta	780
aggcccaaga	ctaattacac	ttcaagccaa	gacaccctaa	tatctgtgtc	atacaccatc	840
cttaccctat	tgttcaatcc	aatgatttat	agtctgagaa	ataaggaatt	caaatcagcc	900
ctacgaagaa	caatcggcc	aactttctat	cctcttagt			939

<210> 165

<211> 954

<212> DNA

<213> Unknown (H38g13 nucleotide)

<220>

<223> Synthetic construct

<400> 165

tgtgtcgatt	cttcttttaa	atgagaaatc	acacagtgat	gtctgagttt	gttactgtga	60
atggctgagg	gctggagatt	gtatttcatt	atcctgatta	tatcttataa	attttgtacc	120
cttttgggaa	atgttatatt	caggaccctt	gtttgttctt	tgggatttca	cacatcatgc	180
atgtattttt	ttccttgaaa	aatatcattg	tgattggcat	gagtttgtct	tcaattattg	240

ctttaccttc	aacgcagaaa	tgagccatca	atgttcaggg	tgctgctgct	catgttttct	300
cctttccttg	cctgtactgc	cccagatct	tcttgcatc	actgacacag	tgccaccctt	360
ttattgccat	tggatatcca	ctgcaaggta	tgacacccat	tacacacaaa	ctgtatatatac	420
tgctcaccac	agggccctgg	agaggctgct	agctacatgt	caatctcctg	atgctatatt	480
aggcagctac	cctaactctg	tgccaacgaa	gttatggctg	tcattcccat	cacattcctg	540
aagtcaaact	gtgacctatg	caagcatata	ctaagcccta	tgccgggtctc	tctctctgctc	600
tctctcttag	tctctctctc	tctttctctc	tcttttccat	tatttccata	tcttataatct	660
gcaatgaaat	tgacatacca	aaaattatct	ctgcagacag	tgtgcatgga	gctttctcaa	720
cctgccttgc	tcacctcttt	gctttctcaa	cctgcattgc	tcaacctgca	gtctgcaact	780
ctttgtggcc	atggacagaa	gctcagaccg	agagctctct	gcgattctgt	gattcagaga	840
ccgaacttgt	gtgtgacct	ctccttgaa	tccttgattt	ctagcctgag	aatgaaagt	900
gtgaaacaag	cttcacataa	aatattttaa	gaacaaactt	tattcatgaa	aata	954

<210> 166

<211> 998

<212> DNA

<213> Unknown (H38g14 nucleotide)

<220>

<223> Synthetic construct

<400> 166

atggatggag	agaatcactc	agtggatatct	gagtttttgt	ttctgggact	cactcattca	60
tgggagatcc	agctcctcct	cctagtgttt	tctctgtgct	tctatgtggc	aagcattact	120
ggaaacatcc	tcattgtgtt	ttctgtgacc	actgaccctc	acttacactc	ccccatgtac	180
ttctactagg	ccagtctctc	cttcattgac	ttaggagcct	gctctgtcac	ttctcccaag	240
atgatttatg	acctgttcag	aaagcgcaaa	gtcatctcct	ttggaggctg	catcgctcaa	300
atctttctca	tccacgtcat	tgggtggtgtg	gagatgggtgc	tgctcatagc	catggccttt	360
gacagttatg	tggccctatt	aagccctctc	actatctgac	cattatgagc	ccaagaatgt	420
gcctttcatt	tctggctgtt	gcctggacc	ttgggtgctag	tcactccctg	ttccaactgg	480
cattttctgt	taatttacc	ttctgtggcc	ctaattgtgtt	ggacagcttc	tactgtgacc	540
ttctcagct	tctcagacta	gcctgtaccg	acacctacag	attgcagttc	atggctcactg	600
ttaacagtgg	gtttatctgt	gtgggtactt	tcttcatact	tctaattctc	tacatcttca	660
tcctgtttac	tgtttgga	cattcctcag	gtgggtcacc	caaggccctt	tccactcttt	720
cagctcacag	cacagcggtc	cttttgttct	ttgggtccacc	catgtttgtg	tatacatggc	780
cacaccctaa	ttcacagatg	gacaagtttc	tggctatttt	tgatgcagtt	ctcactcctt	840
ttctgaatcc	agttgtctat	acattcagga	ataaggagat	gaaggcagca	ataaagagag	900
tatgcaaa	gctagtgtat	tacaagaaga	tctcataaat	gatacaataa	gcccttctcg	960
ttaaacaatga	tatggcttta	tgtttctttc	tttgatat			998

<210> 167

<211> 966

<212> DNA

<213> Unknown (H38g15 nucleotide)

<220>

<223> Synthetic construct

<400> 167

cacacagggc	cacggaatct	cacagatgtc	tgagaattcc	tctcctggg	actctcagag	60
gatccagaac	tgcagccact	cctcactttg	ctgtccctgt	ccctgtccat	gtatctggct	120
acgggtgctga	ggaacctgct	cagcatcctg	gctgtcagct	ctgactcccc	cctccacacc	180
cccatgtact	tcttctctc	caacctgtgc	tgggctgaca	tcggtttcac	ctaggccaca	240
gtccccaaga	tgattgtgga	catgcagtcg	catagcagag	tcattctctca	tgcggtctgc	300
ctgatacaga	tgtctttatt	agtccttttt	gcatgtatag	aaggcatgct	cctgactgtg	360
atggcctatg	actgctttgt	agccatctgt	tgccctctgc	actaccagct	catcgtgaat	420
cctcacctct	gtgtcttctt	cgttttgggt	tcctttctcc	ttagcttgtt	ggattcccag	480
ctgcacagtt	ggattgtgtt	acaattcacc	atcatcaaga	atgtggaaat	ctctaattct	540
gtctgtgacc	ccctctatct	tctcaaactt	gctgttctg	acagcgtcat	caatagcata	600
ttcatatatt	tcgatagtac	tatgtttggg	tttcttccca	tttcagggat	cctatgggtct	660
tactataaaa	tcgtccctc	cattctcagg	atttcatcgt	cagatgggaa	gtataaagcc	720

ttctccacct	gtgcctctca	cctagcagtt	gtttgctgat	tttatggaac	aggcattggc	780
atgtacctga	cttcagctgt	gtcaccaccc	cccaggaatg	gtgtggtggc	gtcagtgatg	840
tacgctgtgg	tcaccccat	gctgaacctt	ttcatctaca	gcctgagaaa	cagggacata	900
caaagtgcc	tgcgaggct	acgcagcaga	acagtcgaat	ctcatgatct	gttccatcgt	960
ttttct						966

<210> 168

<211> 837

<212> DNA

<213> Unknown (H38g16 nucleotide)

<220>

<223> Synthetic construct

<400> 168

atgtacctgg	ccactgtcct	ggggaacctg	ctcatcatcc	tggccataag	catagactcc	60
cgctgcaca	cccccatgta	cttcttcttc	agcaacatgt	cctttgtgga	caactgcttc	120
tccaccacgg	tccccaagat	gctggccaat	cacatactca	ggactcaaac	catctccttc	180
tctggctgtc	tcatgcagat	gtattttatc	agtgaagctt	ctgacatgga	caatttcttc	240
ctggctgtga	tggcctatga	ccgctttgtc	gccgtgtgcc	gccccttaca	ttacacagca	300
aagatgaccc	atcagctctg	tgccctgctg	gtcactggat	catgggtggg	tgccaactcg	360
aatgctctgc	tgcacacctt	gctgatggct	cgactctcat	tctgtgcaga	caacaccatc	420
ccccacatct	tctgcgatgt	gactccccct	ctgaaactct	cctgttcaga	cacacacctc	480
agtgaagtga	tgattcttac	tgaggctgcc	ctagtcacga	tcacccatt	tctttgcctc	540
ctggcttctt	atatgcacat	cacctgcgtt	gtcctgaggg	tcccatccac	aaagggaaga	600
tggaaagcct	tctccacctg	tggctcccac	ctggctgtgg	ttctcctctt	ctatggcacc	660
atcatgtctc	catatttcag	aacttcaccc	tccactcag	ctcagagaga	tatagcagct	720
gctgtgaggt	tcacagtggg	gactccccgt	atgaatcctt	tgatctacag	cctgaggaac	780
aaggacataa	aaggggctct	tgtaaaagtg	gttgctgtga	aatttttttc	tgttcaa	837

<210> 169

<211> 770

<212> DNA

<213> Unknown (H38g17 nucleotide)

<220>

<223> Synthetic construct

<400> 169

ttcattctct	ggggtttctt	tgaccacccc	tagccggaaa	tgtttctctt	cataatgggg	60
cttggtgctt	atctctgcat	actggtggac	aacatctcaa	ttattgtggg	accagggga	120
tattttaggg	gagcaccaaa	tgcattcatt	tagctgtgac	gtctttggat	ccttacattg	180
ccatctgcaa	acacttgagg	taccagcta	tcattgcatc	gcaactctgt	gtcctcctag	240
tggccatggc	atggctaagc	agtttgcca	actctacttc	agtcattcct	tgccgtccag	300
ctgccactag	gcgtaacaa	ggtggacgac	tttctgtgtg	aggtctcagc	gatgatcaag	360
atatcacgtt	ttgacaccac	attcaatgta	tctatgctct	ccattgtgag	gatattttag	420
tccctcgctt	tctaataaat	tatctttgct	tactgtggat	tcattgtagc	tactgtgctg	480
aggattcagt	cctcaggggg	aaagaaggag	gtcttcaaca	catgtgggtc	tcattattgta	540
tctctcctct	atgggcctgt	aattagcatg	tatgtacagc	cctctgccaa	ctcccaggac	600
aaaaacaaat	tcattgacct	gttctacagt	ttgggtgact	ctatgcttaa	cccttttatc	660
tacactttga	gcaacagggg	cataaaaggg	gcaatgagga	ggcttcttgt	ctttttgtat	720
caccaggaag	agaacaaaag	taattatttt	tatactccac	attcttcata		770

<210> 170

<211> 1003

<212> DNA

<213> Unknown (H38g18 nucleotide)

<220>

<223> Synthetic construct

<400> 170

tctacagacc	cacagaatgt	aacggatgtc	tctcgattcc	tcctcctcaa	actctcagag	60
gatccagaac	tgcagccggg	ccttgctggg	ctgttcctgt	ccatgtgcct	ggtcacgggtg	120
ctggggaacc	tgtcatcat	cctggccgtc	agccctgact	cccacctcca	cacttccatg	180
tactttcttc	tctccaacct	gtccttgcc	gacatcggtt	tcctctcccc	cacgggtcccc	240
aagatgggtg	tggacatcca	atctcacagc	agtcacatcc	tatgcaggct	gcctgactca	300
gatgtctctc	tttgccattt	ttggaggcat	ggaagagaca	catgtcctcg	aatgtgatgg	360
cctatgtccg	gtttgtagcc	atctgtcacc	ctctatatca	ttcagccatc	atgaaccctg	420
gtttctgtgg	cttcttactt	ttgttgctct	ttttttttct	cgggtcttcta	gacgcccagc	480
tgcacaacat	gattgcctta	caaatgacct	gcttcaagga	tgtggaaatt	cctaatttct	540
tctgtgatcc	ttctcaactc	ccccatcttg	catgtttgtg	caccttcacc	aataacatca	600
tcatgtattt	ccctgctgcc	gtatttggtt	tccttcccat	ctcggggacc	cttttctctt	660
actctaaaat	tgtttcctcc	attctgaggg	tttcgtcatc	aggtgggaag	tataaacctt	720
ctccacctgt	gggtctcacc	tgtcagtttt	ttgctgattt	tatggaaacag	gcattggagg	780
gtacctcagt	tcagatgtgt	catcttccct	gagaaaggct	gcagtggcct	cactgatgta	840
caagatgggc	acccccatgc	tgaacccctc	catctacagc	ctgagaaaca	gggatattaa	900
aagtgtcctg	cggcagccgc	acggcagcac	ggtctaattc	caagaccttc	ttatctgttc	960
cattcctttt	gtagtgtggg	ttaaaaaagg	cagcaaggtc	aaa		1003

<210> 171

<211> 998

<212> DNA

<213> Unknown (H38g19 nucleotide)

<220>

<223> Synthetic construct

<400> 171

atggatggag	agaatcactc	agtggatatc	gagtttttgt	ttctgggact	cactcattca	60
tgggagatcc	agctcctcct	cctagtgttt	tcctctgtgc	tctatgtggc	aagcattact	120
ggaaacatcc	tcattgtatt	ttctgtgacc	actgaccctc	acttacactc	ccccatgtac	180
tttctactgg	ccagtctctc	cttcattgac	ttaggagcct	gctctgtcac	ttctcccaag	240
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gcctttcatt	tctggctggt	gcctggaccc	ttggtgtcag	tcactccctg	ttccaactgg	480
catttcttgt	taatttacc	ttctgtggcc	ctaagtgtgt	ggacagcttc	tactgtgacc	540
ttctctggct	tctcagacta	gcctgtaccg	acacctacag	attgcagttc	atggtcactg	600
ttaacagtgg	gtttatctgt	gtgggtactt	tcttcatact	tgtaatctcc	tacatcttca	660
tcctgtttac	tgtttgga	cattcctcag	gtgggtcctc	caaggccctt	tcactcttt	720
cagctcacag	cacagcggtc	cttttgttct	ttgggtccacc	catgtttgtg	tatacatggc	780
cacaccctaa	ttcacagatg	gacaagtttc	tggtatattt	tgatgcagtt	ctcactcctt	840
ttctgaatcc	agttgtctat	acattcagga	ataaggagat	gaaggcagca	ataaagagag	900
tatgcaaaaca	gctagtgtat	tacaagaaga	tctcataaat	gatacaataa	gcccttcttg	960
ttaaacatga	tatggcttta	tgtttctttc	tttgatat			998

<210> 172

<211> 1018

<212> DNA

<213> Unknown (H38g20 nucleotide)

<220>

<223> Synthetic construct

<400> 172

gatacagacc	cacagagtct	aacagatgtc	tctatatctc	tcctcctcga	actctcagag	60
gatccagaac	tgcagccggg	cctcgtctggg	ctgttctctg	ccatgtgcct	ggtcacgggtg	120
ctcaggaacc	tgtcatcat	cctggccatc	agccctgact	cccacctcca	cacccccatg	180
tactttcttc	tctccaacct	gtcctttcct	gacagtcgtt	tcacctccac	cacagtcccc	240
aagatgattg	tggacatcca	gtctcacagc	agagtcactc	cctatgcagg	ctgcctgact	300
cagatgtctc	tctttgccat	ttttggagac	atggaagaga	gacatgttcc	tgagtgtggg	360

ggcctatgac	cggttttag	ccatctgtca	ccctttatat	cgttcagcca	tcttaaacc	420
ctgtttctgt	ggcttcctag	attcgttgte	ctgttttttt	tttttttttt	tttctcagtc	480
tttttagactc	ccagctgcac	aacttgattg	ccttacaaat	gacctgcttc	aaggatgtgg	540
aaattcctaa	tttcttctgg	gaaccttctc	aactcccca	tcttgcatgt	tgtgacatct	600
tcaccaggaa	catcaacctg	tatttccttg	ctgccatatt	tggttttctt	cccatctcgg	660
ggacgctttt	ctcttactat	aaaattgttt	ccttcattct	gaggggttca	tcatacaggtg	720
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ggcctcagtg	atgtacacgg	tggtcacccc	catgctgaac	cccttcattc	acagcctgag	900
aaacggggat	attaaaagt	tcctgcggca	gccgcacggc	agcacagtct	aatctcaata	960
tcttcttatt	tgttccattc	ctttttagt	gtgggttaaa	aaaggcagca	aggtcaaa	1018

<210> 173

<211> 942

<212> DNA

<213> Unknown (H38g21 nucleotide)

<220>

<223> Synthetic construct

<400> 173

atggagacaa	gaaaatactc	tgccatgact	gaattctttc	tgggtggggct	ttcccaatat	60
ccagagctcc	agctttttct	gttcctgtc	tgccatcatca	tgtacatgat	aatcctcctg	120
ggaaatagcc	tcttcattat	catcaccatc	ttggattctc	gcctccatac	tcccatgtat	180
ttctttcttg	gaaacctctc	attcctggac	atctgtttaca	catcctcacc	cattctctcca	240
atgcttatta	tatttatgtc	tgagagaaaa	tccatctcct	tcattggctg	tgctctgcag	300
atggtttgtgt	cccttggtct	gggtccact	gagtgtgtcc	tcctggctgt	gatggcctat	360
gaccactatg	tggccatctg	caaccactg	aggtactcca	tcatacatgaa	cggagtgtctg	420
tatgtgcaaa	tggctgcacg	gtcctggatc	ataggctgtc	tgacctccct	attgcaaaca	480
gttctgacaa	tgatgttgcc	tttctgtggg	aataatgtca	ttgatcatat	tacctgtgaa	540
atthttggccc	ttctaaaact	tgthttgtca	gatatacaca	tcaatgtgtc	tatcatgaca	600
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tgthtcagcgc	actcgattgt	ggtcatctta	ttctacgggt	cagccctttt	tatgtacatg	780
aaacccaagt	caaagaacac	taatacatct	gatgagatta	ttgggctgtc	ttatggagtg	840
gtaagcccaa	tgthaaatcc	catcatctat	agcctcagga	ataaagaggt	caaagaggct	900
gtaagaaaag	tcctgagcag	acatctgcat	ttattgaaaa	tg		942

<210> 174

<211> 958

<212> DNA

<213> Unknown (H38g22 nucleotide)

<220>

<223> Synthetic construct

<400> 174

atgaagaata	aaaggaatgt	gactgaattc	gttttaacag	gtcttacaca	gaaccctaaa	60
atggagaaaag	tcatgtttgc	agtatttttg	gttcttttaca	tgataaacact	ttcaggcaac	120
ctgctccttg	tggttacaat	taccaccagc	caggctctta	gctcccccat	gtacttcttc	180
ctgagccacc	tttctttgat	agacacagtt	tattcttctt	cttcagctcc	taagttgatt	240
gtcgattccc	ttcatgagaa	gaaaatcatc	tcctttaatg	gggtgatggc	tcaagcctat	300
gaagaacaca	tttttggtgc	tactgagatc	atcctgtga	cagtgatggc	ctgtgacaac	360
tatgtggcca	tctgcaaac	tctgcactac	acaaccatca	tgagccacag	cctgtgcatt	420
ctcctagtgg	tagtggcctg	gataggagga	tttctccatg	caaataattca	gattctattt	480
acagtatggc	tgcccttctg	tggccccaat	gtcatagacc	acttcatgtg	tgacttgtgc	540
cctttgttaa	aacttgtttg	cctggacact	catacccttg	gtctctttgt	tgctgccaac	600
agtgggttca	tctgcttatt	aaacttctct	ctctaggtgg	tatcctatgt	gatcatcttg	660
agatgtttaa	agaactatata	cttgaggggg	aggggtaaag	ccctctccac	ctgtatttct	720
cacatcataa	tagttgtctt	attctttgtg	ccttgtatat	ttgtgtatct	gcacccagtg	780
acaaactctg	cccattgata	aagctgctgc	tgtattttat	actatgggtg	tcccaatggt	840

aaatcctttg atctacacac tcagaaatgc tgaggtaaaa agtgcaataa ggaagctttg 900
 gagaaaaaaa gttatttcag ataatgacta aataagacca ttgagcactc atcataga 958

<210> 175.

<211> 933

<212> DNA

<213> Unknown (H38g23 nucleotide)

<220>

<223> Synthetic construct

<400> 175

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ctggagacta	ttctgttggt	cctgtttttg	tcctttctaca	tcttcaccct	tatggggaac	120
ctgctcatct	tgtctgctat	tgtctcctct	gctcggtctc	acacgcccac	gtacttcttc	180
ctgtgcaagc	tgtctgtttt	tgacctatct	ttcccttctg	tgagttcccc	taagatgctg	240
tgctatcttt	caggggaacag	cagagccatc	tcctatgcag	gctgtgcac	ccagctcttc	300
ttctaccatt	tcctgggctg	cactgagtgt	ttcctgtaca	cggtgatggc	ctacgaccgc	360
tttgttgcca	tttgtcacc	tctacgctac	accataatca	tgagccacag	agcatgtatc	420
atcctagcca	tggggacctc	attctttggc	tgcattcagg	ccacctttct	gaccactctc	480
accttccaat	tgccctactg	tgtccccaat	gagggtggact	attatttctg	tgatatccca	540
gtcatgctga	agctggcttg	tgcagatacc	tcagccctgg	agatgggtggg	gttcatcagt	600
gtgggcctca	tgccctctag	ctgtttcctt	ctcctctca	cctcctacag	tggcatcgtc	660
ttctccatct	tgtagatctg	ctctgccgag	ggccgacgcc	gtgccttctc	cacctgcagc	720
gcccacctca	ccgccatcct	gcttttttac	atgccagtgg	tcctcattta	cctgaggcct	780
accacagcc	tgtggttgga	tgcaactgtt	caaattctga	ataacctggg	cacccccatg	840
ctgaaccct	taatctacag	tctcaggaat	aaggaggtga	aattatcact	aaggaaggtc	900
ttatatcagc	tgggcttctt	tcctgagcag	ttg			933

<210> 176

<211> 906

<212> DNA

<213> Unknown (H38g24 nucleotide)

<220>

<223> Synthetic construct

<400> 176

atggacatac	cacaaaatat	cacagaattt	ttcatgctgg	ggctctcaca	gaactcagag	60
gtacagagag	ttctctttgt	ggtctttttg	ctgatctatg	tggtcacggg	ttgtggcaac	120
atgctcattg	tggtcactat	cacctccagc	cccacgctgg	cttccccctg	gtattttttc	180
ctggccaacc	tatcctttat	tgacaccttt	tattcttctt	ctatggctcc	taaactcatt	240
gctgactcat	tgtatgaggg	gagaaccatc	tcttatgagt	gctgcattgg	tcagctcttt	300
ggagctcatt	ttttgggagg	tgttgagatc	attctgctca	cagtgatggc	ttatgaccgc	360
tatgtggcca	tctgtaagcc	cctgcacaat	actaccatca	tgaccaggca	tctctgtgcc	420
atgctttag	gggtggcttg	gcttgggggc	ttcctgcatt	cattggttca	gctcctctg	480
gtcctttggt	tgcccttctg	tgggcccac	gtgatcaatc	actttgcctg	tgacttgtac	540
cctttgctgg	aagttgcctg	caccaatacg	tatgtcattg	gtctgctggg	ggttgccaac	600
agtggtttaa	tctgcctggt	gaacttcctc	atgctggctg	cctcctacat	tgatcatcctg	660
tactccttga	ggtcccacag	tgcagatggg	agatgcaaag	ccctctccac	ctgtggagcc	720
cacttcattg	ttgttgctt	gttctttgtg	ccctgtatat	ttacttatgt	gcatccattt	780
tctactttac	ctatagacaa	aaatatggca	ttattttatg	gtattctgac	acctatgttg	840
aatccactca	tttataccct	gagaaatgaa	gaggtaaaaa	atgccatgag	aaagctcttt	900
acatgg						906

<210> 177

<211> 798

<212> DNA

<213> Unknown (H38g25 nucleotide)

<220>

<223> Synthetic construct

<400> 177

atgatcacac	tgattgggct	cagttctcac	ctgcacacac	ctatgtacta	tttctcagc	60
agtctgtcct	tcattgactt	ctgccattcc	actgtcatta	cccctaagat	gctggggaac	120
tttgcgacag	agaagaacat	catctcctac	cctgaatgca	tggtcagct	ctatttatcc	180
agtatttttg	ctattgcaga	gtgtcacatg	ttggctgcaa	tggtgatga	ctgttatgtt	240
gccatctgca	gccccttgct	gtacaatgtc	atcatgtcct	atcaccactg	cttctggctc	300
acagtgggag	tttacatttt	aggcatcctt	ggatctacaa	ttcataccag	ttttatgttg	360
agactctttt	tgtgcaagac	taatgtgatt	aaccattatt	tttgtgatct	tttccctctc	420
ttggggctct	cctgtctccag	cacctacatc	aatgaattac	tggttctggg	cttgagtgca	480
tttaacatcc	tgatgcctgc	cttaaccatc	cttgcttctt	acatctttat	cattgccagc	540
atcctccgca	ttcactccac	tgagggcagg	tccaaagcct	tcagcacttg	cagctccac	600
atcttggtcg	ttgctgtttt	ctttggatct	gcagcattca	tgtacctgca	gccatcatct	660
gtcagctcca	tggaccagag	gaaagtgtcg	tctgtgtttt	atactactat	tgtgcccag	720
ctgaaccccc	tgatctacag	cctgaggaat	aaagatgtca	aacttgccgt	gaagaaaatt	780
ctgcatcaga	cagcatgt					798

<210> 178

<211> 954

<212> DNA

<213> Unknown (H38g26 nucleotide)

<220>

<223> Synthetic construct

<400> 178

atgggaaact	ctaatacagtc	tttcatgaca	gaatttgtcc	tgctggggct	ttctggctac	60
ccagagctag	aggccattta	ctttgtgctg	gtcctatgta	tgtatttggg	gatcctgttg	120
ggaaatggag	tcatacatcat	tgtgagtgtt	tatgacaccc	acttgcacac	ccccatgtac	180
tttttctcca	gtaacttata	attcttggac	atctgtctaca	ctagtctcatc	tattccacta	240
tttctcagca	gcttcttaac	gtcaaagaaa	actatttctc	tctctgggtg	tgagtgcaa	300
atgtttctct	cttttgcata	gggagcaaca	gagtgtgtcc	ttctaagtat	gatggcgttt	360
gactgctatg	tggtccatctg	taaccctcta	tgatacccta	tcatacatgag	caaggcttca	420
tacatgtcca	tggctgcggg	gtcctggatt	ggaggaggca	tcaattctgt	gttgcaaacc	480
tcccttgcaa	tgcggcttcc	tttctgtgga	gataacgtca	ttaatcattt	tacttgtgaa	540
atcttggtcg	tcttaaaaatt	ggcctgtgct	aatatctcca	taaatattat	tagcatgggt	600
gttgctagta	tgatttttct	tgtagggcca	gtacttttta	tttttgttac	atatgttttt	660
attctctcca	ccatccttag	aattccttct	gcagaaggaa	ggcacaaagc	ctcctccacc	720
tgtctgtccc	acctaacagt	ggtgattata	ttctacagaa	ccatcctttt	catgtatgca	780
aagcccaagg	ctaaagactc	ttctgggtgca	gacaaagaac	aagtcacaga	caaaatcatc	840
tccctgttct	atggagtggg	gacacctatg	cttaatcctc	ttatctatag	tttgaggaac	900
aaagacgtga	aggcagctgt	gaagagtata	ctgtgacaaa	aatgcttctt	ggaa	954

<210> 179

<211> 984

<212> DNA

<213> Unknown (H38g27 nucleotide)

<220>

<223> Synthetic construct

<400> 179

aaatctatga	aaaagatgaa	caatgtaata	gaattcatatc	tgctgggcct	cactcacaat	60
ccagaactgc	agaaattctt	gtttgttatg	tttttaataca	cctacttgat	cacattggca	120
ggtaacctgt	tcatactcag	catcatcttc	atcagcccag	ccctgggttc	ccccatgtac	180
tcttttccgt	cctatttgtt	cattatagac	attttctgct	cttcttccat	agccccataa	240
atgaactttg	acttgatctc	tgaaaagaac	accatatcct	tcaatggctg	catgactcag	300
ctcttcacag	aacatttctt	tacagaacat	ttcttttgagg	cagctgagat	catcttatta	360
agtgtcatgg	cctatgacca	ctatgtggcc	atccgtaagc	ccttgcaacta	tgcaaccatc	420
atgagccaac	ctatgtgtgg	attcctgatg	gtggtggctg	ggattctggg	atttgtgcat	480

ggagggatcc	agactttggt	catagcccag	ttaccattct	gtggcccca	tgtcatcaac	540
cactttatgt	gtgatttagt	acctcttctg	gagctggcct	gcacagacac	tcacaccttg	600
gggcctctga	ttgctgcca	cagtgggtca	ctgtgttcc	tcattttttc	catgctgggt	660
gcttctatg	tcatactct	gtgcttctg	aggactcata	gctctgaagg	gcgtcgcaaa	720
gctctgtcta	gttgctgctc	tcatactctc	attgtcatct	tattctttgt	ccctttttca	780
tacctgtatc	taagacctaa	cctccttccc	cactgacaaa	gctgtgactg	tgttttgac	840
cctatttaca	cctatgttga	accctttaat	ctacaccctc	aaaaataaag	aagtgaataa	900
tgtcattaag	aagctctgga	agcaataaat	gacaactgat	gataataaag	tcttgtgaca	960
caaacattta	ggcaagaata	tctg				984

<210> 180

<211> 954

<212> DNA

<213> Unknown (H38g28 nucleotide)

<220>

<223> Synthetic construct

<400> 180

atggaatggg	aaaaccacac	cattctggtg	gaattttttc	tgaagggact	ttctgggtcac	60
ccaagacttg	agttactctt	ttttgtgctc	atcttcataa	tgtatgtggt	catccttctg	120
gggaatggta	ctctcatttt	aatcagcatc	ttggaccctc	accttcacac	ccctatgtac	180
ttctttctgg	ggaacctctc	cttcttggac	atctgtctaca	ccaccacctc	tattccctcc	240
acgctagtga	gcttcttttc	agaaagaaa	accatttccc	ttctgtggtg	tgcagtgcag	300
atgttcctcg	gcttggccat	ggggacaaca	gagtgtgtgc	ttctgggcat	gatggccttt	360
gaccgctatg	tggctatctg	caaccctctg	agatatccca	tcatacatgag	taaggatgcc	420
tatgtaccca	tggcagctgg	gtcctggatc	ataggagctg	tcaattctgc	agtacaatca	480
gtgtttgtgg	tacaattgcc	tttctgcagg	aataacatca	tcaatcattt	cacctgtgaa	540
attctggctg	tcataaaact	ggcctgtgct	gacatctcag	acaatgagtt	catcatgctt	600
gtggccacaa	cattgtttat	attgacacct	ttgttattaa	tcattgtctc	ttacacgtta	660
atcattgtga	gcatactcaa	aattagctct	tccgagggga	gaagcaaagc	ttcctctacc	720
tggttcagccc	atctgactgt	gggtcataata	ttctatggga	ccatcctctt	catgtacatg	780
aagcccaagt	ctaaagagac	acttaattcg	gatgacttgg	atgctaccga	caaaattata	840
tccatgttct	atgggggtgat	gactcccatg	atgaatcctt	taatctacag	tcttagaaac	900
aaggatgtga	aagaggcagt	aaaacaccta	ctgaacagaa	ggttcttttag	caag	954

<210> 181

<211> 792

<212> DNA

<213> Unknown (H38g29 nucleotide)

<220>

<223> Synthetic construct

<400> 181

atggtagaca	acctaatacat	tgtggtgaca	atcaccacca	gcccagccct	ggactccccc	60
gtgtattttt	ttctgtcttt	cttttctctc	atagatggct	gctcctcttc	taccatggcc	120
cccaaaatga	tatttgactt	actcactgaa	aagaaaacta	tttcttctag	tgggtgcatg	180
accagctct	ttgtagaaca	tttctttggg	ggagttgaga	tcattctgct	cgtggtgatg	240
gcctatgact	gctatgtggc	catctgcaag	cccctgtact	acctgatcac	aatgaacagg	300
caggtatgtg	gcctcctggg	ggccatggca	tgggtcgggg	gatttcttca	cgctctgatt	360
caaatgcttt	taatagtctg	gctgcccttc	tgtggcccca	atgtcattga	ccatttcate	420
tgtgaccttt	tccctctgct	aaaactctcc	tgcaactgaca	ctcacgtctt	tggactcttt	480
gttgccgcca	acagtgggct	gatgtgtatg	ctcatttttt	ctattcttat	tacctcttac	540
gtcctaatec	tctgtctaca	gcggaaggct	ctctctacct	gcgccttcca	tactactgta	600
gtcgtcctat	tctttgttcc	ctgtatatgt	gtgtaccttc	gacctatgat	caccttccct	660
attgataaag	ctgtgtctgt	gttttatact	gtggaacac	ccatgttaaa	ccctttaatc	720
tacacctca	gaaacacaga	ggtgaaaaat	gccatgaagc	agctctggag	ccaaataatc	780
tggggtaaca	at					792

<210> 182

<211> 936
 <212> DNA
 <213> Unknown (H38g30 nucleotide)

<220>
 <223> Synthetic construct

<400> 182

atgtggccca	atattactgc	agcccccttt	ttgctgactg	gttttccagg	gctggaggca	60
gctcatcact	ggatctccat	ccccttcttt	gctgtttatg	tgtgcatcct	tctgggcaat	120
ggcatgctcc	tctacctcat	caagcatgac	cacagtcttc	atgagcccat	gtactatttc	180
ctcaccatgc	tggcaggcac	agacctcatg	gtgacattga	ccacgatgcc	tactgtaatg	240
ggcatcctat	gggtgaatca	cagggagatt	agcagtgtgg	gctgcttcct	acagggttac	300
tttattcact	ccctttctgt	tgtggaatca	ggttccctcc	tggcaatggc	atatgatcgt	360
ttcattgccca	tccgcaatcc	tttgagatat	gcttccattt	tcaccaatac	tagagtcata	420
gcgttaggag	tgggagtgtt	tctaaggggt	tttgtatcca	tcctgcctgt	aattttgcgt	480
cttttttcat	tttcatattg	caaatctcat	gttatcacac	gtgctttctg	cctccaccaa	540
gaaatcatga	gactggcttg	tgtgacata	actttcaata	gactttaccc	tgtaattttg	600
atctctttta	caatcttctc	agactctctg	atcatcctct	tctcctatat	tctaattctt	660
aatactgtca	taggcattgc	ctctgggtga	gagagagcca	aagccctcaa	tacctgtatc	720
tcccacatta	gttgtgttct	tatcttctat	gttacgggtga	tgggtttgac	attcatttac	780
agatttgagg	agaatgtgcc	agaggttgct	cacattatca	tgagttacat	ctacttcctc	840
tttctctctt	taatgaacce	tgtcatctac	agcatcaaaa	ccaagcaaat	acaatatggc	900
attatccgcc	ttttatctaa	acataggttt	agtagg			936

<210> 183
 <211> 854
 <212> DNA
 <213> Unknown (H38g31 nucleotide)

<220>
 <223> Synthetic construct

<400> 183

gacacagagc	cacagaatct	cacagctgtc	tcagaattcc	tcctcctggg	actctcagag	60
gatccagaac	tgcagcccat	cctcgctggg	ctcttcctgt	ccatgtacct	ggtcacgggtg	120
ctgggggaacc	tgtcatttat	cctggccatc	ggctctgact	cccacctcga	caccccatg	180
tacttcttcc	tctccaacct	gtccttgccct	gacatcggtt	tcacctcggc	cacgggtcccc	240
aagatgattg	aggagatgca	atcgcatagc	agagtcattc	accatgggga	ctgctgacac	300
agatgtcttt	ctttgtcctt	tttgcatgta	aggatgacat	gacccctgact	gtgatggcct	360
atgactgggt	tgtggccatc	tgtcaccccc	tgaactaccc	aggcatcatg	aatcctcacc	420
tctgtgtctt	attagttttg	gtgccttttt	tccttagcct	gttggattcc	cagctgcaca	480
atgttgattgt	gttacaattc	atctgcttca	agaatgtgga	aatctctaat	tttttctgtg	540
acccgtttca	acgtctcaac	cttgccctgtt	ctgacagtga	catcaataac	atatacatat	600
atttagatag	tactatattt	ggttttcttc	gcatttcagg	gacccctttt	tggtactata	660
cagttgtctt	ccccattcta	agaattccat	cctcagatgg	gaattataaa	gccttctcca	720
cctgaggctc	tcgcctggca	gttgtttgct	tattttatgg	aacaggcatt	ggcgtgtacc	780
tgacttccgc	tgtgtcatca	tccccaggga	atgatgtggg	ggcgtcagta	atgtacgctg	840
tggtgggtcac	cccc					854

<210> 184
 <211> 951
 <212> DNA
 <213> Unknown (H38g32 nucleotide)

<220>
 <223> Synthetic construct

<400> 184

atgggtgaga	taaaccagac	acttgtgtca	gaatttcttc	ttctgggtct	ttctggatac	60
ccaaagattg	agattgttta	ctttgctctc	attctagtta	tgtacctagt	gattctaat	120

ggcaatggtg	ttctaatacat	agccagcattc	tttgattctc	atcttcacac	accaatgtac	180
ttcttcctgg	gcaacctctc	tttctggat	atctgctata	catcctcctc	tggtccctca	240
acattggtga	gcttaatactc	aaagaaaaga	aacatttctc	tctctggatg	tgcatgagc	300
atgttctttg	ggtttgcaat	gggggtcaaca	gaatgtctgc	ttcttggcat	gatggcattt	360
gatcggttatg	tggccatctg	caacccactg	agatacccca	tcacctctgag	caagggtggcg	420
tatgtattga	tggcttctgt	gtcctggctg	tccggtggaa	taaattcagc	tggtgcaaaca	480
ttacttgcca	tgagactgcc	tttctgtggg	aataatatta	tcaatcattt	cgcatgtgaa	540
atattagctg	tcctcaagct	ggcctgtgct	gatatatccc	tcaatattat	caccatggtg	600
atatcaaata	tggccttctc	ggttcttcca	ctgatgggtca	tttttttctc	ctatatgttc	660
atcctctaca	ccatcttgca	aatgaattca	gccacaggaa	gacgcaaggc	attttccacg	720
tgctcagctc	acctgactgt	ggtgatcata	ttttacggta	ccatcttctt	tatgtatgctg	780
aaaccgaagt	ctcaagacct	gattggggaa	gaaaaattgc	aagcattaga	caagctcatt	840
tctctgtttt	atggggtagt	gacacccatg	ctgaatccta	tactctatag	cttgagaaat	900
aaggatgtaa	aagctgctgt	aaaatatattg	ctgaacaaaa	aaccaattca	c	951

<210> 185

<211> 927

<212> DNA

<213> Unknown (H38g33 nucleotide)

<220>

<223> Synthetic construct

<400> 185

atgggtgcca	agaacaatgt	gactgagttt	gttttatttg	gcctttttga	gagcagagag	60
atgcagcata	catgctttgt	ggtattcttc	ctctttcatg	tgctcactgt	cctggggaac	120
cttctgggtca	tcatacccat	caatgctaga	aagaccctga	agtctcccat	gtattttcttc	180
ctgagccagt	tgtcttttgc	tgacatatgt	tatccatcca	ctaccatacc	caagatgatt	240
gctgacactt	ttgtggagca	taagatcatc	tccttcaatg	gctgcatgac	ccagctcttt	300
tctgcccact	tctttgggtg	cactgagatc	ttcctcctta	cagccatggc	ctatgaccgc	360
tatgtggcca	tctgtaggcc	cctgcactac	acagccatca	tggattgccg	gaagtgtggc	420
ctgctagcgg	gggcctcctg	gttagctggc	ttcctgcatc	ccatcctgca	gacctcctc	480
acgggttcagc	tgcttttttg	tgggcccatt	gagatagaca	acttcttctg	tgatgttcat	540
cccctgctca	agttggcctg	tgcagacacc	tacatggtag	gtctcatcgt	ggtggccaac	600
agcggtagta	tttcttttagc	atcctttttt	atccttatca	tttctatgt	tatcatctta	660
ctgaacctaa	gaagccagtc	atctgaggac	cggcgtaagg	ctgtctccac	atgtggctca	720
cacgtaatac	ctgtcctttt	ggttctcatg	ccccccatgt	tcatgtacat	tcgtccctcc	780
accaccttgg	ctgctgacaa	acttatcatc	ctctttaaca	ttgtgatgcc	acctttgctg	840
aaccttttga	tctatacact	aaggaacaac	gatgtgaaaa	atgccatgag	gaagctgttt	900
aggggtcaaga	ggagcttagg	ggagaag				927

<210> 186

<211> 987

<212> DNA

<213> Unknown (H38g34 nucleotide)

<220>

<223> Synthetic construct

<400> 186

gctacttgcc	acttgtgaac	acacaatgcg	gctccttttt	tgctgcctgg	cttttcagta	60
ctggaggcaa	cttatcactc	gatctccatc	cccttctttg	ctgttttatgt	gtgcgtcctt	120
cttggaatg	gcaagctcct	ctacctcatc	aagcatgacc	acagtcttca	cgaacccatg	180
tactgtttcc	ttgccacact	gaggcaagac	ctcatggtga	aattgaccat	gatgccact	240
gtaatgggcg	tcttgtggat	gaatcacaaa	gagggttatcc	atggggcctg	cttcttgagc	300
gtttacatta	tcactcccca	ttatccactt	gcagaatcag	gtattctcct	gtcaatggcc	360
tatgaccgtt	tcattatcat	ccacatgctt	ctcagggtata	actctatttc	tactaaatct	420
tgggtgaaga	tagaactgtg	gctattttatg	agggaactttt	tatccctcgt	gcctccaatt	480
ctgccactcc	attgcttccc	atattgtcat	tcccatgttc	tcttccacac	cttttttctc	540
catcaagatg	tcctgaaact	tgccgtgtgct	gatattacat	tcaatcactt	ataccagct	600
attctgggtg	cttttgatttt	cttccatagac	gctctgatca	ttgtcttttc	ttatatcctg	660

atccttaaaa	cagttatagg	tattgcctcc	agaaaagagc	aagccaaagc	tctcaacatg	720
tgtgtctccc	atatcagctg	tgtcttggtg	tttcacatca	ccgtgatcag	tgagactttc	780
attcacaggt	ttgggaaaca	tgcaccacat	gtggtgcaca	ttaccgtgag	ctaatacttc	840
atttcttttt	cctccattca	tgaaccttat	tatatagagc	atcaaaccac	gcagatccaa	900
agaagcattg	ttcgccctatt	ttctggggcac	agaatgggctt	gagccctttt	ttcagaattt	960
tgtgatcttc	atgattttctg	ggccttt				987

<210> 187

<211> 887

<212> DNA

<213> Unknown (H38g35 nucleotide)

<220>

<223> Synthetic construct

<221> misc_feature

<222> (1)...(887)

<223> n = A,T,C or G

<400> 187

ctgctgctcc	tggtgctcct	gctgcccacg	ttcctgctga	gtcttntggg	gaacntgctc	60
atcatctcca	ctgtgctgtc	ctgctcccg	ctccacaccc	ccatgacttc	ttcttgtgca	120
acctctctat	cctggacatc	ctcttcacct	cagtcacttc	tccaaaagt	ttggccaact	180
taggatctag	ggataaaacc	atctcctttg	ccggatgtat	caccagtg	tatttctact	240
ttttcttggg	cacagttgag	ttcctcctgc	tgacgggtcat	gtcctatgac	tgctatgccg	300
ccatctgctg	ccccctgcg	tacaccacca	tcattgagacc	ttatgtctgc	attgggaccg	360
ttgtgttctc	ttgggtggga	ggcttcctgt	ctgtgctctt	tccaaccatc	ctcatctccc	420
agctgccctt	ctgtggctcc	aatatcatta	accacttctt	ctgtgacagt	ggacccttgc	480
tgccctggc	ctgtgcagac	accactgcca	tcgagctgat	ggattttatg	ctttcttcca	540
tggtcatcct	ctgctgcata	gtcctcgtgg	cctattccta	tacgtacatc	atcttgacca	600
taatgcgcat	tccttctgca	agtggaagga	agaaggcctt	taatacctgt	gcttcccacc	660
tgaccatagt	catcatttct	agtggcatca	ctgtgtttat	ctatgtgact	ccctcccaga	720
aagaatatct	ggagatcaac	aagatccctt	cggttctgag	cagtttggtg	actccattcc	780
tcaaccctt	tatatatact	ctgaggaatg	acacagtgc	gggagtcctc	agggatgtgt	840
gggtcaggg	tcgaggagtt	ttcgaaaaga	ggatgagggc	agtgtctg		887

<210> 188

<211> 930

<212> DNA

<213> Unknown (H38g36 nucleotide)

<220>

<223> Synthetic construct

<400> 188

atgtggtata	acaacagtgc	tgcccccttc	ttgtgtgactg	gcttcttggg	ctcagaggca	60
gttcactacc	ggatctctat	gtccttcttt	gtcatctact	tctccgtcct	ttttggaaat	120
ggcactcttc	ttgtcctcat	ttggaatgat	cacagcctcc	atgagcccat	gtactacttc	180
ctggctatgc	tggcagacac	ggaccttggg	atgacattca	ctacaatgcc	cacagtcctg	240
ggtgtcctgc	tgctagacca	gagggagatt	gcccattgctg	cctgtttcac	ccaatccttc	300
attcattcac	tggccattgt	agaatcaggt	atcttgcctg	ttttggccta	tgactgtttc	360
attgccatcc	gcacaccact	gaggtacaac	tgcattctta	ccaattccc	agtgtgaac	420
ataggactgg	gggtactgat	gagaggtttt	atgtccattt	tgcccataat	tctttcactc	480
tactgctacc	catattgtgg	ttcccgtgcc	ctcttgacca	cattttgcct	ccatcaagat	540
gtcataaaac	tcgcctgtgc	tgatatcacg	tttaatacaca	tatatccaat	tattcagact	600
tctttgactg	tctttttaga	tgtcttaatc	atcatctttt	cttatatact	aatccttaag	660
acagtgtatg	gcattgcgtc	tggaacaagag	gaagctaaat	ctctcaacac	ttgtgtctcc	720
catattagct	gtgtcctagt	atttcacatc	actgtgatgg	gactgtcatt	cattcacagg	780
tttgggaaac	atgcacctca	tgtgggtccc	attaccatga	gctatgtcca	ttttctcttt	840
cctccattcg	tgaatcctat	catttatagc	atcaagacca	agcagattca	aagaagcatt	900
attcgccat	tttctgggca	gagtagggct				930

<210> 189
 <211> 996
 <212> DNA
 <213> Unknown (H38g37 nucleotide)

<220>
 <223> Synthetic construct

<400> 189
 cacacagagc cacggaatct cacagggtgtc tgagaattcc tcctccttgg actcccagag 60
 gatccagaac tgcagccggt tctcgctttg ctctccctgt ccctgtccat gtatctgggc 120
 acggtgctga ggaacctgct catcatcctg gctgtcagct ctgtctctcc cctccacacc 180
 cccatgtact tcttcctctc caacctgtgc tgggctgaca tcggtttcac ctcgccacg 240
 gttcccaaga tgattgtgga catgcagtcg catagcagag ccatctctca tgcgggctgt 300
 ctgacgcaga tgtctttctt gttccttttt gcattgtatag aaggcatgct cctgactgtg 360
 atggcctatg actgctttgt agccatctgt cgccctctgc actaccacgt catcgtgaat 420
 cctcacttct gtgtcttctt cgttttggtg tcttttttcc ttagcctgtt ggattcccag 480
 ctgcacagtt ggattgtgtt acaattcacc atcttcaaga atgtggaaat ctctaatttt 540
 gtctgtgacc cctctcaact tctcaaactt gcctgttctg acggcgctcat caatagcata 600
 ttcatatatt ttgatagtag tatgtttggt tctcttccca ttccagggat cctatggtct 660
 tactataaaa tcgtccctct cattctaagg atttcatcgt cagatgggaa gtataaagcc 720
 ttctccacct gtggctctca ccaggcagtt gtttgcgtgat tttatagaac aggcattggc 780
 atgtacctga cttcagctgt gtcaccaccc cccaggaatg gtgtgggtggc atcattgata 840
 tacgtgttg tcaactccat gctgaacctt ttcattctaca gcctgagaaa caggacata 900
 caaagtgcc tgcggaggct gctcagcaga acagtcgaat ctcatgatct gttccatcct 960
 ttttcttggt gggtagaaaa gggcaaccac attaaa 996

<210> 190
 <211> 930
 <212> DNA
 <213> Unknown (H38g38 nucleotide)

<220>
 <223> Synthetic construct

<400> 190
 atgggagaca atataacatc catcagagag ttctctctac tgggatttcc cgttggccca 60
 aggattcaga tgctcctctt tgggctcttc tccctgttct acgtcttcac cctgctgggg 120
 aacgggacca tactggggt catctcactg gactccagac tgcacgccc catgtacttc 180
 ttctctctac acctggcggt cgtcgacatc gcctacgcct gcaacacggt gccccggatg 240
 ctggtgaacc tcctgcaccc agccaagccc atctcctttg cgggcccgcg gatgcagacc 300
 tttctgtttt ccacttttgc tgtcacagaa tgtctctctc tgggtggtgat gtcctatgat 360
 ctgtacgtgg ccatctgcca cccctccga tatttgcca tcatgacctg gagagtctgc 420
 atcacccctc cggtgacttc ctggaccact ggagtctttt tacccttgat tcatcttgtg 480
 ttactttctac ctttaccctt ctgtaggccc cagaaaattt atcacttttt ttgtgaaatc 540
 ttggctgttc tcaaacttgc ctgtgcagat acccacatca atgagaacat ggtcttggcc 600
 ggagcaattt ctgggctggt gggacccttg tccacaattg tagtttcata tatgtgcac 660
 ctctgtgcta tccttcagat ccaatcaagg gaagttcaga ggaaagcctt ccgcacctgc 720
 ttctcccacc tctgtgtgat tggactcgtt tatggcacag ccattatcat gtatgttgga 780
 cccagatatg ggaaccccaa ggagcagaag aaatatctcc tgctgtttca cagcctcttt 840
 aatcccatgc tcaatcccct tatctgtagt cttaggaact cagaagtga gaatactttg 900
 aagagagtgc tgggagtaga aagggttta 930

<210> 191
 <211> 968
 <212> DNA
 <213> Unknown (H38g39 nucleotide)

<220>
 <223> Synthetic construct

<400> 191

cacacagagc	cacggaatct	cacgggtgtc	tgagaattcc	tcctcctggg	aatctcagag	60
gatccagaac	tgcagcccgt	cctcgctggg	ctgaccctgt	ccatgtacct	ggtcacgggtg	120
ctgaggaacc	tgctcatcat	cctggctgtc	agctctgact	cccacctcca	cacctccatg	180
tacttcgtcc	tctccaacct	gcgctgggtt	gacatcggtt	tcacctcggc	cacggttccc	240
aagatgattg	tggacatgca	gtcgcatagc	agagtcattc	cttatggggg	ctgcctgaca	300
cagatgtcct	tcttggctct	ttttgcatgt	atagaagaca	tgctcctgac	tgtgatgtcc	360
tatgaccaat	ttttggccat	ctgtcaccac	ctgcactacc	cagtcacgt	gaatcctcac	420
ttctgtgtct	tcttagtttt	ggtgtccttt	ttccttagcc	tgttggattc	ccagctgcat	480
agatggattg	tgttacaatt	caccttcttc	aagaatgtgg	aaatctctaa	ttttgtctgt	540
gagccatctc	aacttctcaa	ccttgccctg	tctgacagcg	tcataaatat	catattcata	600
tatttagata	gtactatgtt	tggttttctt	cccatttcag	ggatcctttt	gtcttactat	660
aaaattgtcc	cctccattct	aaggatgtca	ttgtcagatg	tgaagtataa	agccttctcc	720
acctgtggct	ctcacctggc	agttttttgc	ttattttacg	gagcaggcat	tggcgtgtac	780
ctgacttcag	ctgtgtcacc	accttccggc	aatgggtgtg	tggcttcagt	gatgtacact	840
gtggtcaccc	ccatgtctga	ccctttcatc	tacagcctga	gaaacaggga	cattcaaagt	900
gccccgtgga	ggctgctgca	cacaacagtt	gaatctcatg	atctcttcca	tcctttttct	960
tgtgtctg						968

<210> 192

<211> 960

<212> DNA

<213> Unknown (H38g40 nucleotide)

<220>

<223> Synthetic construct

<400> 192

cacacagagc	cacagaatct	cacaggtgtc	tgagaattcc	tcctcctggg	actctcagag	60
gatccagaac	tgcagcccat	cctggctggg	ctgtccctgt	ccatgtatct	ggtcacgggtg	120
ctgaggaacc	tgctcatcat	cctggctgtc	agctctgacc	cccacctcca	cacccccatg	180
tgttctcttc	tctccaacct	gtgctgggct	gacatcggtt	tcaccttggc	cacggttcct	240
aagatgattg	tggacatgca	gtctcatacc	agagtcattc	cttatgaggg	ctgcctgaca	300
cggatatctt	tcttggctct	ttttgcatgt	atagaagaca	tgctcctgac	tgtgatggcc	360
tatgactgct	ttgtagccat	ctgtcgccct	ctgcactacc	cagtcacgt	gaatcctcac	420
ctctgtgtct	tcttcccttt	ggtatacttt	ttccttagct	tgttggattc	ccagctgcac	480
agttggattg	tgttacaatt	caccatcatc	aagaatgtgg	aaatctctaa	ttttgtctgt	540
gacctctctc	aacttctcaa	acttgccctg	tctgacagcg	tcataaatag	catattcatg	600
tatttccata	gtactatgtt	tggttttctt	cccatttcag	ggatcctttt	gtcttactat	660
aaaatcgtcc	cctccattct	aaggatttca	tcatacagatg	ggaagtataa	agccttctcc	720
acctgtggct	ctcacttggc	agttgtttgc	tgattttatg	gaacaggcat	tggcgtgtac	780
ctgacttcag	ctgtgtcacc	acccccagg	aatgggtgtg	tagcgtcagt	gatgtacgt	840
gtggtcaccc	ccatgtctga	ccttttcatc	tacagcctga	gaaacaggga	catacaaagt	900
gccctgcgga	ggctgctcag	cagaacagtc	gaatctcatg	atctgttcca	tcctttttct	960

<210> 193

<211> 980

<212> DNA

<213> Unknown (H38g41 nucleotide)

<220>

<223> Synthetic construct

<400> 193

tctacagact	gacagagtct	aacaggtgtc	tctatatctc	tcctcctaga	actctcagag	60
gatccagaac	tgcagccggt	cctcgctggg	ctgttctctg	ccatgtgcct	ggtaagggtg	120
ctggggaacc	tgctcatcat	cctggccatc	agccctgact	cccacctcca	cacccccatg	180
tacttcttcc	tctccaacct	gtccttgcc	gacatcggtt	tcacctccac	catgggtcccc	240
aagatgattg	tggaaatcaa	tctcacagca	gagtcattct	ctatgcaggc	tgcttgactc	300
agatgtctct	ctttgccatt	tttgaggcca	tggaaagagag	acatgctcct	gagtgatgatg	360

gcctatgacc	ggtttgtagc	catctgtcac	cctctatata	attcagccat	catgaacccg	420
tgtttctgtg	gcttcctagt	tttgctgtct	tttttttctt	tctttttctc	agctgcacaa	480
cttgattgcc	ttaaaaatga	cctgcttcaa	gaatgtggga	attcctaatt	tcctctgtga	540
cccttctcaa	ctcccccatc	tcacatgttg	tgacaccttc	accaatcaca	taatcatgta	600
tttccccgct	gccatatttg	gttttcttcc	catctcgggg	acccttttct	cttaccatgt	660
aattgtttcc	tccattctga	gggtttcatc	atctgtggga	ggtgtaaagc	cttccccatc	720
tgtgagttgt	ttgctgatat	tatggaacag	gctttggagg	gtacctcagt	tcagatgtgt	780
catcttccct	gagaaaggct	gcagtggcct	cagtgatgta	catggtgggc	acacccatgc	840
tgaacccctt	catctacagc	ctgagaaaca	gggatattaa	aagtgtcgtg	cagcggccgc	900
atggcagcac	ggtctaattc	caatatcttc	ttatctgttc	cattcctttt	gtagtgtggg	960
ttaaaaaagg	cagcaaggtc					980

<210> 194

<211> 939

<212> DNA

<213> Unknown (H38g42 nucleotide)

<220>

<223> Synthetic construct

<400> 194

atgggaaact	ggagcactgt	gactgaaatc	accctaattg	ccttcccagc	tctcctggag	60
attcgaatat	ctctcttctg	ggttcttgtg	gtaacttaca	cattaacagc	aacaggaaac	120
atcaccatca	tctccctgat	atggattgat	catcgccctg	aaactccaat	gtacttcttc	180
ctcagtaatt	tgtcctttct	ggatatctta	tacaccactg	tcattacccc	aaagtgtgtg	240
gcctgcctcc	taggagaaga	gaaaaccata	tcttttgcgt	gttgcatgat	ccaaacatat	300
ttctacttct	ttctggggac	ggtggagttt	atcctcttgg	cggatgatgc	ctttgaccgc	360
tacatggcta	tctgcgaccc	actgcactac	acggatcatc	tgaacagcag	ggcctgcctt	420
ctgctgggtc	tgggatgctg	ggtgggagcc	ttcctgtctg	tgttgtttcc	aaccattgta	480
gtgacaaggc	taccttactg	taggaaagaa	attaatcatt	tcttctgtga	cattgccccct	540
cttcttcagg	tggcctgtat	aaatactcac	ctcattgaga	agataaaact	tctcctctct	600
gcccttgtca	tcctgagctc	cctggcattc	actactgggt	cctacgtgta	cataatttct	660
accatcctgc	gtatcccctc	cacccagggc	cgtcagaaag	ctttttctac	ctgtgcttct	720
cacatcactg	ttgtctccat	tgcccacggg	agcaacatct	ttgtgtatgt	gagacccaat	780
cagaactcct	cactggatta	tgacaagggt	gccgctgtcc	tcacacagct	ggtgacccct	840
ctcctgaacc	cttttatcta	cagcttgagg	aatgagaagg	tacaggaagt	gttgagagag	900
acagtgaaca	gaatcatgac	cttgatacaa	aggaaaact			939

<210> 195

<211> 737

<212> DNA

<213> Unknown (H38g43 nucleotide)

<220>

<223> Synthetic construct

<400> 195

atgggaaata	tcaacataag	tcttgaaaat	tactttattc	tactgggtct	ttctaattga	60
cctcctctgg	aaatagttat	ttttgtagtt	ctcttgatat	tctgcttcat	gacactgata	120
ggcaagctgt	tcagcatcat	tctgtcatac	ctggactccc	atccccacac	tctcggtact	180
tattctcttt	tctggatttc	tgctacacca	tcagttccat	cttttaatta	cagtacaatc	240
tctggggccc	acagaagaac	atctcttatg	ccagtgggtat	gattcaaatt	tattttgttc	300
tcacactggg	aaccatggat	tgcgctctac	tgggtggtgat	gtccaggact	gtgatgcagc	360
tggacacaga	cacttgccct	atactgttgt	tatggctgtg	gctttttggg	taagtagctt	420
taccaactca	gcatttgatt	ccttttttac	cttctgggta	accctgtgtg	gacatcacta	480
ttatgcttac	atctttatat	ttacatcatt	gttagtataa	agatgggttca	ttaacagaaa	540
gaaacagtct	gtgttctcac	tgaatcatgc	agctttatta	acattatctt	ttccattata	600
aatgactgct	ttccaggaga	ttgaaaagaa	catgttaaga	aaagcacagc	attggagaat	660
ctgaaagcat	gtgatcttgt	tcaattaaac	caagtatcaa	aaacatgcat	ttttatgaga	720
ctatttttagg	aaattca					737

<210> 196
 <211> 949
 <212> DNA
 <213> Unknown (H38g44 nucleotide)

<220>
 <223> Synthetic construct

<400> 196
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 cagcttcaaa tttccctttt ggcagtcctc tggtttactt atatgcttac tctaacagga 120
 aacgttgcca tcatctccct aacatgtgcg aatcatcgcc tccaaacccc aatgtacttc 180
 ttcctcagta attggtcaat ttgggacatt tttttcacca cctcagttat cccaaagcta 240
 ttagcctgtc tctgcagga caagaagacc atatctttgg ctgggtgcat caccctaaact 300
 tatttccttg gttttctggg ggacagtggg gtttatcctc tgggcagtga tgtcctttga 360
 ctgctacgtg gccatctgtg accccctgca ctacaccatt atcatgaaca gcagggcctg 420
 cctcctacta gttctgggct gctgggttgg agccttcctg tctgtgttgt gcccaaccat 480
 tgtggtgtcc agattgcctt tctgttacaa ggaaattagt cacttcttct gtgacatcac 540
 ccctctgcta catgtgtcct gtatagacac tcatcttcac gagatgataa acttccctctt 600
 atcttccctc atcctcctga cctcactggg gctcaccact gtgtcctaca tctacatcat 660
 ttctaccatc ctgcacatcc cctcagccca aggacgtcgg aaggcctttt ccacgtgcgc 720
 ttccacatc accgtcattt ccatcgctta tataagcaac atcttcaggt atgtgaggcc 780
 cagccagagt cattcaatgg gttttgacaa ggtgacagct gtccccacaa tggtgacccc 840
 tcttctgaat cccttcactt atagtctaag aaatgaaaag gtaaaggcag tcttgaaaga 900
 agcagtcagc aaaattatgt cctcatggca caggagaact taaaacttt 949

<210> 197
 <211> 930
 <212> DNA
 <213> Unknown (H38g45 nucleotide)

<220>
 <223> Synthetic construct

<400> 197
 atggaaccac agaaccacc acaggtatca atgtttgtcc tcttaggggtt ttcacagacc 60
 caagagctcc agaaattcct gttccttctg ttcctgttag tctatgttac caccattgtg 120
 ggaaacctcc ttatcatggt cacagtgact tttgactgcc ggctccacac acccatgtat 180
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 atgctgggtg acttccctcca tgagaccaag acgatctcct accagggctg catggcccag 300
 atcttcttct tccacctttt gggaggtggg actgtctttt ttctctcagt catggcctat 360
 gaccgtaca tagccatctc ccagccctc cggtatgtca ccatcatgaa cactcaattg 420
 tgtgtgggccc tggtagtagc cgcctgggtg gggggctttg tccactccat tgtccaactg 480
 gctctgatac ttccactgcc cttctgtgac cccaatatca tagataactt ctactgtgat 540
 gttccccaaag tactgagact tgcctgcact gatacctccc tcttgaggtt cctcatgatc 600
 ttcaacagtg ggctgctagt tatcatctgg ttctcctccc ttctgatctc ttatactgtc 660
 atcctggtga tgcctgaggt ccactcggga aaggcaagga ggaaggcagc ttccacctgc 720
 accaccacaca tcatcgtggt gtccatgatc ttcatctcct gtatctatat ctatacctgg 780
 cccttcaccc cattcctcat ggacaaggct gtgtccatca gctacacagt catgaccccc 840
 atgctcaacc ccatgatcta caccctgaga aaccaggaca tgaaagcagc catgaggaga 900
 ttaggcaagt gcctagtaat ttgcaggagg 930

<210> 198
 <211> 932
 <212> DNA
 <213> Unknown (H38g46 nucleotide)

<220>
 <223> Synthetic construct

<400> 198

gaccaagaaa	atcagacttc	tgaagtcacc	ttcatcctct	tgggcttctc	agaatatcca	60
gaccttcaga	cgcccctggt	cctgggtgttc	ctgaccatct	acacagtcac	tgtgctgggg	120
aatctgggca	tgatcatagt	catcaggatc	agccccaac	tccacacccc	catgtgcttt	180
ttcctcagcc	acttgtcctt	tgttgatttc	tgttattcca	ccacaattac	acccaaactg	240
ctggagaact	tggttggtga	agatagaact	atctccttca	caggatgcac	catgcagtta	300
ttctttgtct	gcataattgt	agtaacagaa	acattcatgc	tggcagtgat	ggcctatgac	360
cgatatgtgg	cggtgtgtaa	ccctcttctc	tacacagttg	caatgtacca	gaggctttgc	420
tccttgttag	tggtctacatc	atactgttgg	gggatatgtc	gttccctgac	acttacctag	480
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gctgccattg	ttgctgtgtc	ttgctctgac	ccctgtgtga	gccaggagat	cactttagtt	600
tctgccacat	tcaatgaaat	aagcagcctg	cttcctatgc	tttcattttt	atcactgtca	660
tgaagacgcc	ttccactggg	gggcgcaaga	aagcgttctc	cacgtctgcc	tcccacttga	720
cggccattac	cattttccat	gggactatcc	ttttcctcta	ctgtgttctt	aactccaaaa	780
gttcgtggct	catggccaag	gtggcctctg	tcttttacac	agtggtcatt	cccatgctga	840
accccttgat	ctatagcctc	aggaacaaa	atgtaaaaga	gacagttagg	aggttactca	900
ttaccaaatt	attatgtctc	atattataaa	at			932

<210> 199

<211> 1000

<212> DNA

<213> Unknown (H38g47 nucleotide)

<220>

<223> Synthetic construct

<400> 199

tatgcagacc	cacagaatct	aacagatgtc	tctatatctc	tcctcctaga	agtctcaggg	60
gatccagaac	tgcagccagt	ccttgctggg	ctgttcctgt	ccatgtgcct	ggtcacgggtg	120
ctggggaacc	tgctcatcat	cctggccatc	agccctgact	cccacctcca	cacccccatg	180
tacttcttcc	tctccaacct	gtccttgcc	gacatcggtt	tcacctccac	cacgggtcccc	240
aagatgattg	tggacatcca	gtctcacagc	agagtcattc	cctatgcagg	ctgcctgact	300
cagatgtctc	tctttgccat	ttttggaggc	atggaagaga	gacatgctcc	tgagtgtgat	360
ggcctatgac	tggtttgtag	ccatctgtca	cccgtatat	cattcaccat	catgaacccg	420
tggtttctgtg	cctttctagt	tttggtgtct	tttttttct	cagtctttta	gactcccagc	480
tgcacaactt	gattgcctta	caagtgcact	gcttcaagga	tgtggaaatt	cctaatttct	540
tctgtgacct	ttctcaactc	tcccatcttg	catgttgtga	caccttcacc	attaacataa	600
tcattgtattt	ccctgctgcc	atatttggtt	ttcttcccat	cttggggacc	cttttctctt	660
tctctaaaat	tggttctctc	attctgaggg	ttcttctatc	aggtgggaag	tataaagccc	720
tctccacctg	tgggtctcgc	ctgtcagttg	tttgctgagt	ttatggaaca	ggcgttggag	780
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acacactggg	cacccccatg	ctgacccctt	tcattctacag	cctgagaaac	agggatatga	900
aaggtgtcct	gcggcagccg	cacggcagca	cagtctaata	tcaatatctt	atctgttcca	960
ttcctttgta	gtgtgggttc	aaaaaggcag	caaggtcaaa			1000

<210> 200

<211> 921

<212> DNA

<213> Unknown (H38g48 nucleotide)

<220>

<223> Synthetic construct

<400> 200

atggaaacag	ggaacctcac	gtgggtatca	gactttgtct	tcctggggct	ctcgcagact	60
cgggagctcc	agcgtttcct	gtttctaata	ttcctggttg	tctacatcac	cactgttatg	120
ggaaacatcc	ttatcatcat	cacagtgcac	tctgattccc	agctccacac	acccatgtac	180
tttctgtctc	gaaacctggc	tgtcctagac	ctctgtttct	cttcagtcac	tgctcccaaa	240
atgctagtgg	acctcctctc	tgagaagaaa	accatctctt	accagggctg	catgggtcag	300
atcttcttct	tcactttttt	gggaggtgcc	atggctctct	tcctctcagt	gatggccttt	360
gaccgcctca	ttgccatctc	ccggcccttc	cgctatgtca	ccgtcatgaa	cactcagctc	420
tgggtggggc	tggtggtagc	cacctgggtg	ggaggctttg	tccactctat	tgtccagctg	480

gctctgatgc	tcccactgcc	cttctgtggc	cccaacattt	tggataactt	ctactgtgat	540
gttccccaag	tactgagact	tgccctgact	gacacctcac	tgctggagtt	cctcaagatc	600
tccaacagtg	ggctgctgga	tgctgtctgg	ttcttccctc	tcctgatgtc	ctacttattc	660
atcctggatga	tgctgaggtc	acatccaggg	gaggcaagaa	ggaaggcagc	ttccacctgc	720
accacccaca	tcacgtgggt	ttccatgata	ttcgttccaa	gcatttacct	ctatgcccgg	780
cccttcactc	cattccctat	ggacaagctt	gtgtccatcg	gccacacagt	catgaccccc	840
atgctcaacc	ccatgatcta	taccctgagg	aaccaggaca	tgcaggcagc	agtgagaaga	900
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<210> 201

<211> 947

<212> DNA

<213> Unknown (H38g49 nucleotide)

<220>

<223> Synthetic construct

<400> 201

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gatccagaac	tgacgccggg	cctcgctttg	ctctccctgt	ccctgtccat	gtatctgggc	120
atgggtgctga	ggaacctgct	cagcatcctg	gctgtcagct	ctgtctctcc	cctccacacc	180
cccacctgtg	ctgggctgac	atcgggtttca	ccttggccac	ggttcccaag	atgattgtgg	240
acatgcagtc	gcatagcaga	gtcatctctc	atgcgggctg	tctgacgcag	atgtctttct	300
tcattcctttt	tgcatgtata	gaaggcatgc	tcctgactgt	gatggcctat	gactgctttg	360
tagccatctg	tcgccctctg	cactaccag	tcacgtgaa	tcctcacctc	tgtgtcttct	420
tcgttttgggt	gtcctttttc	cttagcctgt	tggattccca	gctgcacagt	tgaattgtgt	480
tacaattcac	catcatcaag	aatgtggaaa	tctctcattt	ttctctgtgac	ccctctcaac	540
ttctcaaact	tgccctgttct	gacagcgtca	tcaatagcat	attcatatat	ttcgatagta	600
ctatgtttgg	ttttcttccc	atttcagggg	tcctatgggc	ttactataaa	atcatcccct	660
ccatttctaag	gatttcatca	tcatatggga	agtataaagc	cttctccaca	tgtgcctctc	720
acctagcagt	tgtttgctga	ttttatgtaa	caggcattgg	catgtacctg	acttcagctg	780
tgtcaccacc	ccccagcaat	gggtgtagtg	cgtcagtgat	gtatgtctgc	gtcactccca	840
tgctgaaccc	tttcatctac	agcctgagaa	acagggacat	acaaagtgcc	ctgcggaggg	900
tgctcagcag	aacagtcgaa	tttcatgata	tggtccatcc	ttttct		947

<210> 202

<211> 369

<212> DNA

<213> Unknown (H38g50 nucleotide)

<220>

<223> Synthetic construct

<400> 202

atgtctggct	ccccactca	actgacagca	ggccccagga	cagccagtgg	ctgtgtcatc	60
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atccgttcag	cagccagccg	ccggaaggcc	ttctccacct	gttcttccca	cctgggcatg	180
gtgctcctgt	tctatggcac	cggcagctcc	acctacatgc	gacccaccac	ccgctactcc	240
ccgctggaag	ggcgcttggc	tgctgtcttc	tactccatcc	tcataccacc	cctgaatccg	300
ctcatctaca	gcctgaggaa	ccaggacatg	aagagagccc	tgtggaagct	ctatctccag	360
gtgccatac						369

<210> 203

<211> 1068

<212> DNA

<213> Unknown (H38g51 nucleotide)

<220>

<223> Synthetic construct

<400> 203

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atgatcaatg atagccactt cagtgggttt atactccttg gattcacagg gcagcctcag      60
cttcagatga tgatctctgg ggttgtcttt ttcttctaca ctattgcctt catgggaaat      120
atggccatca tectattgtc ttctctagat gaccatctcc aagtcccat gtacttcttc      180
cttagaaatt tggccatctt ggatctctgt tataccacaa atatagtccc acaaagtgtg      240
gtcagtatct ggggcaaaga caaaagaatt acctttggtg ggtgtgcctt tcaacttttc      300
attgatgtgg cactgtactc agttgaatgc atccttctgt ccatgatgtc atatgatcga      360
ctcaatgcta tctgcaagcc tctgcatcat atgaccataa tgaacctcca actctgccag      420
ggccttgtgg tcatctcctg ggtagtgtgt gtgattaatt gcatcatacc ttccccttat      480
gccacgagtc ttctctgatg taggaaccac cacctagacc acttttttgt gtgtgtgaaa      540
tgtctgcaat gatcaagatt caagattgca tgtgtggaca ccacagccat ggaggttaacc      600
acatttgcca tgtgctgat tatagtctt ttctctcttc ttcttattct tgtgtcatat      660
ggtttctattg ctgtggctgt actcaagatc aagtctgcag caggaagaca aaaagcattt      720
gggacctgtt cctcccatct cgttgtggta tccatcttct gtgggacagt tacatacatg      780
tatatacagc caggaaacag tccaaatcag aatgagggca aacttctcag tatattttac      840
tccattgtta ctcccagctt gaaccatta atttatacgg taaggataaa ggagttcaag      900
ggggccatga agaggctaac tggaaaagaa aaagattgca tggaaaaaag aggacattga      960
ttcttctctc cagcaatttc taatatggca attgatcttc ccaatctaaa atgtagacaa     1020
tttattttgt aaataaattg tctacacctg agataaagat aatatcca      1068

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<210> 204

<211> 949

<212> DNA

<213> Unknown (H38g52 nucleotide)

<220>

<223> Synthetic construct

<400> 204

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atgatcaatg atagttactt tggttggctt atgtccttg ggttccttg gaagcctcag      60
ctggagatga tcatctctgg ggttgtcttt ttcttctatg caatttcttt gatgggaaat      120
atggtcctta tctgtctgcc attactggat aaacatctcc aaaccccat atatttcttt      180
cttagaaatc tggctatctt ggatctttgt tacaccacaa atatagtccc acagatgttg      240
gtcaatgcct ggggtaaaga caagaaaatc acttttgggtg gctgtgcttt tcaacttttc      300
actaatgtga cgctatgcac ggttgaatgt atgcttcttg ctgtgatgtc atatgacca      360
ttcaatgctg tctgcaagcc tctggactat atgaccataa tgaaccccca actctgtcaa      420
ggcctgggtg ccatgacctg gtttaattgg gtcactaatt gcatgatact ttcccctgt      480
cctgtgagtc ttctctgatg cggagaccac cacctggatc actatttttg tgaaatatct      540
gcaatggta aaattgcatg tggggctacc acagtcatgg agggaaaacc ttatttgcatt      600
tgtgtgttg ttgttcttt catttctctt gcatcacttc ttctcattct tgtgtcatat      660
ggcttcattg ctgtggctgt actcaagatc aagtctgcag caggaagaca aaaagcattt      720
gggacctgtt tctcccatct cattgtggta tccatcttct atgggactgt tagatatatg      780
tatatagagc caggaaacag tccatctcag gatgagggca aacttctcca tatattttac      840
tccattgtta ctcccactt gaaccatcc cactaaggaa taaggagttc aagtgggcca      900
tgaaaaggct tattggaaaa gaaaaagggt ctggagacac aatagggtca      949

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<210> 205

<211> 936

<212> DNA

<213> Unknown (H38g53 nucleotide)

<220>

<223> Synthetic construct

<400> 205

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atgggttaacc aaagctccac accgggcttc ctcttcttg gtttctctga acaccagg      60
ctggaaagga ctctcttctg ggttgtcttc acttctacc tcttaaccct agtgggcaac      120
acactcatca tctgtctgtc tgcgtggac cccaagctcc actctccaat gtactttttc      180
ctctccaacc tctcttctt ggacctctgt ttaccacga gttgtgttcc ccaaagtctg      240
gtcaacctct gggggccaaa gaagaccatc agcttctctg actgctctgt ccagatcttc      300
atcttctctg ccctggggac aactgagtgc atctcttga cagtgatggc ttttgatcgc      360
tacgtggctg tctgccagcc cctccactat gccaccatca tccaccccg cctgtgctgg      420

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cagctggcat	ctgtggcctg	ggtcattggg	ctagtggagt	cagtgggtcca	gacaccatcc	480
accctgcacc	tgcccttctg	ccccgatcgg	caggtggatg	attttgtctg	tgagggtccca	540
gctctaattc	gactctcctg	tgaagacacc	tcctacaatg	agatccaggt	ggctgttgcc	600
agtgtcttca	tcttggttgt	gcctctcagc	ctcatccttg	tctcttacgg	agccattacc	660
tgggcagtgc	tgaggattaa	ctctgcaaaa	gggcgaggga	aagcttttgg	gacctgctcc	720
tcccatctca	ctgtgggtcac	cctcttctac	agctcagtca	ttgtctgtcta	cctccagccc	780
aaaaatccct	atgcccaaga	gaggggcaag	ttctttgggtc	tcttctatgc	agtgggcact	840
ccttcactta	accctctcat	atacaccctg	aggaacaagg	aggtaccag	ggcattcagg	900
agattgctgg	ggaaggaaat	ggggctcaca	caaagc			936

<210> 206

<211> 1030

<212> DNA

<213> Unknown (H38g54 nucleotide)

<220>

<223> Synthetic construct

<400> 206

atggttaacc	aaagctccgc	accaggcttt	ctccttctg	gcttctctga	acaccagca	60
ctggaaagga	ctctctttgt	agttgtcttc	acttcctacc	tcctaacc	gggtggactca	120
tcatcctgct	gtctgtgctg	gacccaggc	tcactctcc	aatgtacttt	ttcctctcca	180
acctctcctt	cttggacctc	tgtttcacca	taagttgtgt	ccccgggatg	ctgggtcaacc	240
tctgggagcc	aaagaagacc	atcatcttac	tgggctgctc	tgtccagttc	ttcatcttcc	300
tgtccctggg	gaccactgag	tgcactctcc	tgacgggtgat	ggcctttgac	cgctacatgg	360
ctatcttcaa	gcccctgcgc	catgccacca	tcgtccacct	ctgcctgtgc	tggcagctgg	420
catctgtggc	ctgggtcatt	gggctggtag	agtcagtggt	ccagacacca	tcaccctgc	480
gcctgccttt	ctgcccccat	cagcagggtg	atgattttgt	ctgtgaggtc	ccagctctaa	540
ttcgactctc	ctgtgaagac	acctcctaca	atgagatcca	gatggctgtt	gccagtgtct	600
tcatcttggc	tgtgcctcag	cctcatcctt	gtctcttatg	gagccattgc	ctgggcagtg	660
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gaaggaaatg	gggctcatac	aaagttgagg	gagagctgtt	taatgtgctt	tctaaattaa	960
gaagaaatta	tttatccttt	tgtgaacaag	tttgagctcc	caagtatact	acctttcata	1020
caccatcac						1030

<210> 207

<211> 873

<212> DNA

<213> Unknown (H38g55 nucleotide)

<220>

<223> Synthetic construct

<400> 207

atgttcgcgc	cccttgctct	cctgtgctac	ctcctgacct	tgacgggcaa	ctcggcgctg	60
gtgctgctgg	cgggtgcgcga	cccgcgcctg	cacacgcccc	tgtactactt	cctctgccac	120
ctggccttgg	tagacgcggg	cttcaactact	agcgtgggtgc	cgccgctgct	ggccaacctg	180
cgcggaccag	cgctctgggt	gccgcgcagc	cactgcacgg	cccagctgtg	cgcatcgctg	240
gctctgggtt	cggccgaatg	cgctctcctg	gcgggtgatg	ctctggaccg	cgcgcccaag	300
aaagtgaag	gggcagcgag	gaggctgctg	cggagtctgg	ggagaggcca	ggctgggcag	360
agcgctcct	ggctaagcgg	cctcaccaac	tcggttgccg	aaaccgcgct	cctggctgag	420
cggccgctgt	gcgcgccccg	cctgctggac	cacttcatct	gtgagctgcc	ggcgttgctc	480
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gtctgtttgca	tgcggttcag	cggaggccgg	aggaggcg	tgggcacgtg	tgggtccac	660
ctgacagccg	tctgcctgtt	ctacggctcg	gccatctaca	cctacctgca	gccccgcgag	720
cgctacaacc	aggcacgggg	caagttcgta	tcgctcttct	acaccgtggg	cacacctgct	780
ctcaaccgc	tcacttacac	cctcaggaat	aagaaagtga	agggggcagc	gaggaggctg	840

ctgcggagtc tggggagagg ccaggctggg cag

873

<210> 208

<211> 921

<212> DNA

<213> Unknown (H38g56 nucleotide)

<220>

<223> Synthetic construct

<400> 208

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ttctcactca taactacaat atatgcactg actataacag gtaatggagc cattgctttt	120
gccctgtggt gtgaccggcg acttcacact cccatgtaca tgttcctggg agatttctcc	180
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gagaaaacaa acatctcctt tgctggattg ctttctccag atctatttct tcttctcttt	300
gatacatcag aatgcttgct tttgactgtg atggcctttg atcagaacct tgctatctgc	360
cggcccttgc actatcctaa tatcatgact gggcatctct gtgccaact ggccatactg	420
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attgtgtttc tgccccaaga atccaactgt tttgctacac tctaagctca ttagttattt	600
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cgccttcaag cactgggaga cataaggcct tctctacctg tgggtctcat ttggctgtgg	720
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cggagatgca gaaaattgta actttgttct atgctatggt gacctcactc ttcaatcccc	840
ttatctatag gcctccagaa taaggagata aaggcagcct tgaggaaagt tctggtgagt	900
tccaacataa tctaaggcat a	921

<210> 209

<211> 660

<212> DNA

<213> Unknown (H38g57 nucleotide)

<220>

<223> Synthetic construct

<400> 209

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gccctctgca ttaccagtc atcgtaaatc ctacacctg tgtcttcttc gttttgggtg	120
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aggaatggtg tgatggcgtc agtgatgtac gctgtgggtc ccccatgct gaaccttttc	540
atctacagcc tgagaaacag ggacatacaa agtgccctgt ggaggctgct cagcagaaca	600
gtcgaatctc atgatctgtt ccactctttt tcttgtgtgg gtaagggtcaa ccacattaaa	660

<210> 210

<211> 942

<212> DNA

<213> Unknown (H38g58 nucleotide)

<220>

<223> Synthetic construct

<400> 210

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cccaaattgg agattcccc ctttctggtg tttctgagtt tctacctagt cacccttctt	120
gggaatgtgg ggatgattat gttaatccaa gtagatgtca aactctacac cccaatgtac	180

ttcttctctga	gccacctctc	cctgctggat	gcctgttaca	cctcagtcac	cacccctcag	240
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ttctttttat	tcaccatctg	tgaggcaca	gagtgtcttc	tgctggcagt	gatggcctat	360
gategctatg	ctgccattcg	caaccactg	ctctataccg	tggccatgaa	tcccaggctc	420
tgctggagcc	tgggtggtagg	agcctatgtc	tgtgggggtg	caggagccat	cctgcgtacc	480
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atcatcaaga	ccattttgaa	agtgaagtct	tcagggtggca	gggccaagac	ttctctccaca	720
tgtgcctctc	acatcactgc	tgtggccctt	ttctttggag	cccttatctt	catgtatctg	780
caaagtggct	caggcaaacc	tctggaggaa	gacaaagtgc	tgtctgtctt	ctatacagtg	840
gtcatcccca	tgctgaaccc	tctgatctac	agcttaagaa	acaaagatgt	aaaagacgcc	900
ttcagaaagg	tcgctaggag	actccagggtg	tccttgagca	tg		942

<210> 211

<211> 941

<212> DNA

<213> Unknown (H38g59 nucleotide)

<220>

<223> Synthetic construct

<400> 211

atgggtggtc	taaaaagaga	caatgcctct	gagatgactg	aactcatcct	tgttggattt	60
gccaacacc	ctgaaatcca	gactgccttc	ttcttggaac	tactgttttt	ctactagtca	120
cagcgtttga	gaacatcctt	atcggtgctg	tagtgagatg	agattctcga	cttcatactc	180
ctatgggatt	tttttttcc	cagtacctta	tcctcccttg	aaatgtgtta	ctccatcagc	240
tgggagctat	aagtcttggc	tcaatgcac	aaggacttcc	ccaccatctc	ctataacagc	300
tgttctgttc	agatgatcac	acacctcttt	ctggggatga	cagtgtctcc	tccttgctgg	360
catggcttac	aacaggtttg	ttgaaatctc	ttatctcctc	cattacacta	ttattatgag	420
caatcggtc	tgtatacagt	tggccttggg	aatctggacc	catgccttct	tagtagcagt	480
cacactaatc	attgcaattc	ctgctagtta	ttatggacac	aatgtcatca	accattttac	540
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gggtctggta	tcagtgtgtt	cacactgccc	ctgcccttca	cattcatcct	catctcctaa	660
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caaaggggaa	ccaggaagag	gataaagttg	tctcaaaact	ttatggagca	gttactccca	840
tgttaaatcc	cccaattttac	attcagagaa	ataaggatat	aaaagggtgca	cttagaaaagt	900
tagccaaagg	aaatgaaaaa	tcctaacagt	tctctttaa	c		941

<210> 212

<211> 1049

<212> DNA

<213> Unknown (H38g61 nucleotide)

<220>

<223> Synthetic construct

<400> 212

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tacaaccatc	caaaatttca	gattgccttt	tatcgcacca	tggtagtggg	ctacctgac	120
acatttgttg	gtagcagtct	cattattgtt	gtgggttaaag	ttgatgggtg	gcttcacact	180
cctatgtgtt	ttttcctaag	caacctgtcc	ttccttgata	tctgtactc	cagcaattca	240
gtaccttttt	tggtgttcaa	tggcttaaga	gactacccca	ccatttccta	taacagctgt	300
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atggcttatg	agagatttgt	tgtgatctcc	aatccccctgc	gctacatcat	cattatgaac	420
aataagggtc	gcatacagtt	ggcatgggtg	acctgggcca	gtgccttcc	tatgtcatta	480
atacaataat	tgcaataata	cattgcaata	atacattaat	tgcaatgatt	gcattgcaat	540
tctgccccat	ttttgtggac	acaatgtcat	caaccatttt	acctgtgagg	tgcaggaatt	600
gttgaagctt	gtctgtcag	acatcccagg	cagcctcatc	ctcgggtctag	tcacgggcat	660
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tgctcacatt	gtggttgctg	tgctgaggat	caactctgca	gaggccagac	tcaaagcttt	780
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tttgaagta	gagaagcaac	atcaaaatga	tagcatctct	gtattttatg	gtgttgtagc	960
ccctatgttg	aacccccctc	tttacacctt	gagagacaag	gatgcgaaaa	tgctctaaga	1020
aaaataatta	ggaagaaaga	gtcctaaaa				1049

<210> 213

<211> 954

<212> DNA

<213> Unknown (H38g62 nucleotide)

<220>

<223> Synthetic construct

<400> 213

atggacaaga	taaaccagac	atgtgtgaga	gaattcattc	ttctgggact	ctctgggttac	60
cccaaacttg	agatcatttt	ctttgtctctg	attctagtta	tgtacgtagt	gattctaatt	120
ggcaatgggtg	ttctgatcat	agcaagcatc	ttggattctc	gtcttcacat	gcccattgtac	180
ttcttcctgg	gcaacctctc	tttctgggat	atctgctata	caacctctc	cattccctca	240
acactgggtga	gcttaatctc	aaagaaaaga	aacatttcct	tctctggatg	tgcatgtcag	300
atgttctttg	ggtttgcaat	ggggtcaaca	gaatgtttcc	tccttggcat	gatggcattt	360
gatcgttatg	tggtcatctg	taacctctg	agatacccca	tcacatgaa	caagggtggtg	420
tatgtactgc	tgacttctgt	atcatggctt	tctgggtgaa	tcaattcaac	tgtgcaaaaca	480
tcacttgcca	tgcatggcc	tttctgtggg	aacaatatta	ttaatcattt	cttatgcgag	540
atcttagctg	tcctaaaatt	agcttgttct	gatatactg	tcaatattgt	taccctagca	600
gtgtcaaaata	ttgctttcct	agttcttcct	ctgctcgtga	tttttttctc	ctatatgttc	660
atcctctaca	ccatcttgcg	aacgaactcg	gccacaggaa	gacacaaggc	attttctaca	720
tgctcagctc	acctgactgt	ggtgatcata	ttttatggta	ccatcttctt	tatgtatgca	780
aaacctaagt	cccaggacct	ccttgggaaa	gacaacttgc	aagctacaga	ggggcttggt	840
tccatgtttt	atgggggtgt	gaccccatg	ttaaacccca	taatctatag	cttgagaaat	900
aaagatgtaa	aagctgctat	aaaatatttg	ctgagcagga	aagctattaa	ccag	954

<210> 214

<211> 957

<212> DNA

<213> Unknown (H38g63 nucleotide)

<220>

<223> Synthetic construct

<400> 214

atgttccccg	caaattggac	atctgtaaaa	gtatttttct	tcctgggatt	ttttcactac	60
cccaaagttc	aggtcatcat	atgtgcgggtg	tgcttgctga	tgtacctgat	caccttgctg	120
ggcaacattt	ttctgatctc	catcaccatt	ctagattccc	acctgcacac	ccctatgtac	180
ctcttctca	gcaatctctc	ctttctggac	atctgggtact	cctcttctgc	cctctctcca	240
atgctggcaa	actttgtttc	aggagaaaac	actatttcat	tctcagggtg	cgccactcag	300
atgtacctct	cccttgccat	gggtctccact	gagtggtgtg	tcctgcccac	gatggcatat	360
gaccgggtatg	tggtcatctg	caacccccctg	agataccctg	tcacatgaa	taggagaacc	420
tgtgtgcaga	ttgcagctgg	ctcctggatg	acaggctgtc	tactgcccac	ggtggaaatg	480
atgtctgtgc	tgccactgtc	tctctgtggt	aatagcatca	tcaatcattt	cacttgtgaa	540
attctggcca	tcttgaaatt	ggtttggtg	gacacctccc	tggtgcagtt	aatcatgctg	600
gtgatcagtg	tacttcttct	ccccatgcca	atgctactca	tttgatatctc	ttatgcattt	660
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tgcacagccc	acctgatggt	ggtagttttg	ttctatggga	cggctctctc	catgcacctg	780
aagccctccg	ctgtagattc	acaggaaata	gacaaattta	tggttttggt	gtatgccgga	840
caaaccccca	tgttgaatcc	tatcatctat	agtctacgga	acaaagaggt	gaaagtggcc	900
ttgaaaaaat	tgctgattag	aaatcatttt	aatactgcct	tcatttccat	cctcaaa	957

<210> 215

<211> 930

<212> DNA

<213> Unknown (H38g64 nucleotide)

<220>

<223> Synthetic construct

<400> 215

atggcagaga	tgaacctcac	cttggtgacc	gagttcctcc	ttattgcatt	cactgaatat	60
cctgaatggg	cactccctct	cttcctcttg	tttttattta	tgtatctcat	caccgtattg	120
gggaacttag	agatgattat	tctgatectc	atggatcacc	agctccacgc	tccaatgtat	180
ttcctttctga	gtcacctcgc	tttcatggac	gtctgctact	catctatcac	tgtccctcag	240
atgctggcag	tgtctgtgga	gcatggggca	gctttatctt	acacacgctg	tgtctgtcag	300
ttctttctgt	tcaccttctt	tggttccatc	gactgctacc	tcttggccct	catggcctat	360
gaccgctact	tggctgtgtg	ccagcccttg	ctttatgtca	ccatcctgac	acagcaggcc	420
cgcttgagtc	ttgtggctgg	ggcttacgtt	gctgggtctca	tcagtgcctt	ggtgcggaca	480
gtctcagcct	tcactctctc	cttctgtgga	accagtgaga	ttgactttat	tttctgtgac	540
ctccctcctc	tgttaaagtt	gacctgtggg	gagagctaca	ctcaagaagt	gctgattatt	600
atgtttgccca	tttttgcac	ccctgcttcc	atggtgggtga	tcttgggtgtc	ctacctgttt	660
atcatcgtgg	ccatcatggg	gatccctgct	ggaagccagg	ccaagacctt	ctccacctgc	720
acctccacc	tcactgctgt	gtcactcttc	tttgggtaccc	tcactctcat	gtacttgaga	780
ggtaactcag	atcagtcttc	ggagaagaat	cgggtagtgt	ctgtgcttta	cacagaggtc	840
atccccatgt	tgaatccct	catctacagc	ctgaggaaca	aggaagtga	ggaggccctg	900
agaaaaattc	tcaatagagc	caagttgtcc				930

<210> 216

<211> 964

<212> DNA

<213> Unknown (H38g65 nucleotide)

<220>

<223> Synthetic construct

<400> 216

atgggcatgg	agggtcttct	ccagaactcc	actaacttcg	tcctcacagg	cctcatcacc	60
catcctgcct	tccccgggct	tctctttgca	atagtcttct	ccatctttgt	ggtggctata	120
acagccaact	tggctcatgat	tctgctcacc	cacatggact	cccgcctcca	cacacccatg	180
tacttcttgc	tcagccagct	ctccatcatg	gataccatct	acatctgtat	cactgtcccc	240
aagatgctcc	aggacctcct	gtccaaggac	aagaccattt	ccttcctggg	ctgtgcagtt	300
cagatcttcc	tctacctgac	cctgattgga	ggggaattct	tctgctggg	tctcatggcc	360
tatgaccgct	atgtggctgt	gtgcaaccct	ctacggtaacc	ctctcctcat	gaaccgcagg	420
gtttgcttat	tcatgggtgg	cggctcctgg	gttgggtggt	ccttggatgg	gttcagtctg	480
actcctgtca	ctatgagttt	ccccttctgt	agatcccgag	agatcaatca	ctttttctgt	540
gagatccag	ccgtgctgaa	gttgtcttgc	acagacacgt	cactctatga	gaccctgatg	600
tatgcctgct	gcgtgctgat	cgctgcttat	ccctctatct	gtcatctctg	tctcctacac	660
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tacgtgttcc	tcccacatta	tggcgggtgag	cgttttctac	ggggcagcct	tctacaccaa	780
cgtgctgccc	cactcctacc	acactccaga	gaaagataaa	gtggtgtctg	ccttctacac	840
catcctcacc	cccattgctca	acccactcat	ctacagcttg	aggaataaag	atgtggctgc	900
agctctgagg	aaagtactag	ggagatgtgg	ttcctcccag	agcatcaggg	tggcgactgt	960
gac						964

<210> 217

<211> 933

<212> DNA

<213> Unknown (H38g66 nucleotide)

<220>

<223> Synthetic construct

<400> 217

atggctcaca	caaataaatc	gatgggtgtct	gagtttgtac	ttttgggact	ctctaattcc	60
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tgggggacttc	aacttttctt	tttcgccatc	ttctctatag	tctatgtgac	atcagtgcta	120
ggcaatgtct	taattattgt	cattatttct	tttgactccc	atttgaactc	tcctatgtac	180
ttcttgctca	gtaatctttc	tttcattgat	atctgtcagt	ctaactttgc	cacccccaag	240
atgcttgtag	acttttttat	tgagcgcaag	actatctcct	ttgagggttg	catggcccag	300
atattcgttc	ttcacagttt	tgttgggagt	gagatgatgt	tgcttgtagc	tatggcatat	360
gacagattta	tagccatatg	taagcctctg	cactacagta	caattatgaa	ccggagggtc	420
tgtgtaattt	ttgtgtctat	ttcctgggcg	gtgggcggtc	ttcattctgt	gagccacttg	480
gcttttacag	tggacctgcc	attctgtggt	cccaatgagg	tggatagctt	cttttgtgac	540
cttcccttgg	tgatagagct	ggcttgcatt	gatacatatg	aaatggaaat	tatgacccta	600
acgaacagt	gcctgatata	attgagctgt	ttcctggctt	taattatttc	ctacaccata	660
attttgatcg	gtgtccgatg	caggctcctc	agtgggtcat	ctaaggctct	ttctaatta	720
actgccaca	tcacagtgg	cattcttttc	ttcgggcctt	gcatttattt	ctatatatgg	780
ccttttagca	gacttctgt	ggacaaaatt	ctttctgtgt	tctacactgt	ttgtactccc	840
ttgttgaacc	ccatcatcta	ctctctgagg	aatgaagatg	ttaaagcagc	catgtggaag	900
ctgagaaacc	gtcatgtgaa	ctcctggaaa	aac			933

<210> 218

<211> 936

<212> DNA

<213> Unknown (H38g67 nucleotide)

<220>

<223> Synthetic construct

<400> 218

atggatcaga	aaaatggaag	ttctttcact	ggatttatcc	tactgggttt	ctctgacagg	60
cctcagctgg	agctagtcct	ctttgtgggt	cttttgatct	tctatatctt	cactttgtctg	120
gggaacaaaa	ccatcattgt	attatctcac	ttggaccac	atcttcacac	tcctatgtat	180
ttttttctt	ccaacctaa	ctttttggat	ctgtgttaca	caaccggcat	tgttccacag	240
ctcctgggta	atctcagggg	agcagacaaa	tcaatctcct	atgggtgggtg	tgtagtccag	300
ctgtacatct	ctctaggctt	gggatctaca	gaatgcgttc	tcttaggagt	gatggatttt	360
gaccgctatg	cagctggttg	caggcccttc	cactacacag	tagtcatgca	cccttgctctg	420
tatgtgctga	tggcttctac	ttcatgggtc	attgggtttg	ccaactccct	attgcagacg	480
gtgctcatct	tgtttttaac	actttgtgga	agaaataaat	tagaacactt	tctttgtgag	540
gttccctccat	tgtctcaagct	tgcctgtgtt	gacactacta	tgaatgaatc	tgaactcttc	600
tttgtcagtg	tcattattct	tcttgtacct	gttgcattaa	tcatattctc	ctatagtcag	660
attgtcaggg	cagtcagtag	gataaagtta	gcaacagggc	agagaaaagt	gtttgggaca	720
tgtggctccc	acctcacagt	ggtttccttg	ttctacggca	cagctactct	tgtttacctc	780
cagcccgcca	acaactactc	tcaggatcag	ggcaagttca	tctctctctt	ctacaccatc	840
attacacca	tgatcaacct	cctcatatat	acactgagga	acaaggatgt	gaaaggagca	900
cttaagaagg	tgtcttgga	gaactacgac	tccaga			936

<210> 219

<211> 939

<212> DNA

<213> Unknown (H38g68 nucleotide)

<220>

<223> Synthetic construct

<400> 219

atgtgctcag	ggaatcagac	ttctcagaat	caaacagcaa	gcaactgattt	caccctcagc	60
ggactctttg	ctgagagcaa	gcatgctgcc	ctcctctaca	ccgtgacctt	ccttcttttc	120
ttgatggccc	tcaactggga	tgcctctctc	atcctctctc	tccactcaga	gccccgctc	180
cacaccccca	tgtacttctt	catcagccag	ctcgcgtctc	tggatctcat	gtacctatgc	240
gtgactgtgc	ccaagatgct	tgtggggccag	gtcactggag	atgataccat	ttccccgtca	300
ggctgtggga	tccagatggt	cttccacctg	accctggctg	gagctgaggt	tttctctctg	360
gctgccatgg	cctatgacct	atatgctgct	gtttgcagac	ctctccatta	cccactgctg	420
atgaaccaga	gggtgtgcca	gtccttgggt	tcagcctgct	gggttttggg	aatgggtgat	480
ggtttgttgc	tcaccccat	taccatgagc	ttcccttttt	gccagtctag	gaaaatcctg	540
agttttttct	gtgagactcc	tgccttgcct	aagctctcct	gctctgacgt	ctccctctat	600

aagatgctca	cgtacctgtg	ctgcacccctc	atgctttctca	cccccatcat	ggtcacatctcc	660
agctcatata	ccctcaccct	gcacatctc	cacaggatga	attctgccgc	cggccgcagg	720
aaggcccttg	ccacctgtc	ctccacatg	atcatagtgc	tgctgctctt	cgggtgcttcc	780
ttctacacct	acatgctccc	gagttccctac	cacacagctg	agcaggacat	gatgggtgtct	840
gcctttttaca	ccatcttcac	tcctgtgctg	aacccctca	tttacagtct	cgcgaacaaa	900
gatgtcacca	gggctatgag	gagcatgatg	cagtcaaga			939

<210> 220

<211> 942

<212> DNA

<213> Unknown (H38g69 nucleotide)

<220>

<223> Synthetic construct

<400> 220

atggatgtgg	gcaataagtc	taccatgtct	gaatttggtt	tgctggggct	ctctaattcc	60
tgggaactac	agatgttttt	ctttatgggtg	ttttcattgc	tttatgtggc	aacaatgggtg	120
ggtaacagcc	tcatagtcat	cacagttata	gtggaccctc	acctacactc	tcctatgtat	180
ttcctgctta	ccaatctttc	aatcattgat	atgtctcttg	cttctttcgc	caccccaaaag	240
atgattacag	attacctaac	aggtcacaaa	accatctctt	ttgatggctg	ccttaccag	300
atattctttc	tcacaccttt	cactggaact	gagatcatct	tactcatggc	catgtccttt	360
gatagggtata	ttgcaatatg	caagcccctg	cactatgctt	ctgtcattag	tccccagggtg	420
tgtgttgctc	tcgtgggtggc	ttcctggatt	atgggagtta	tgcatccaat	gagtcagggtc	480
atatttgccc	tcacgttacc	attctgtggg	ccctatgagg	tagacagctt	tttctgtgac	540
cttcctgtgg	tggtccagtt	ggcttgtgtg	gatacttatg	ttctgggcct	ctttatgatc	600
tcaacaagtg	gcataattgc	gttgtcctgt	tttattgttt	tatttaattc	atatgttatt	660
gtcctgggtta	ctgtgaagca	tcattcttcc	agaggatcat	ctaaggccct	ttctacttgt	720
acagctcatt	tcattgttgt	cttcttggtc	tttgggccat	gcactcttcat	ctacatgtgg	780
ccactaagca	gctttctcac	agacaagatt	ctgtctgtgt	tttataccat	ctttactccc	840
actctgaacc	caataatcta	tactttgagg	aatcaagaag	taaagatagc	catgaggaaa	900
ctgaaaaata	ggtttctaaa	ttttaataag	gcaatgcctt	ca		942

<210> 221

<211> 930

<212> DNA

<213> Unknown (H38g70 nucleotide)

<220>

<223> Synthetic construct

<400> 221

atgggagaca	atataacatc	catcagagag	ttcctcctac	tgggatttcc	cgttggccca	60
aggattcaga	tgctcctctt	tgggctcttc	tcctgtttct	acgtcttcac	cctgctgggg	120
aacgggacca	tactggggct	catctcactg	gactccagac	tgcaacgccc	catgtacttc	180
ttcctctcac	acctggcggt	cgctgacatc	gcctacgcct	gcaacacggt	gccccggatg	240
ctgggtgaacc	tcctgcatcc	agccaagccc	atctcctttg	cgggccgcat	gatgcagacc	300
tttctgtttt	ccacttttgc	tgacacagaa	tgctcctctc	tggtgggtgat	gtcctatgat	360
ctgtacgtgg	ccatctgcc	ccccctccga	tatttggcca	tcacgacctg	gagagtctgc	420
atcacccctg	cggtgacttc	ctggaccact	ggagtccttt	tatccttgat	tcactctgtg	480
ttactttctac	ctttaccctt	ctgtaggccc	cagaaaattt	atcacttttt	ttgtgaaatc	540
ttggctgttc	tcaaacctgc	ctgtgcagat	acccacatca	atgagaacat	ggtcttggcc	600
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cccagatatg	ggaaccccaa	ggagcagaag	aaatatctcc	tgctgtttca	cagcctcttt	840
aatcccctgc	tcaatcccct	tatctgtagt	cttaggaact	cagaagtga	gaatactttg	900
aagagagtgc	tgggagtaga	aagggtctta				930

<210> 222

<211> 969

<212> DNA

<213> Unknown (H38g71 nucleotide)

<220>

<223> Synthetic construct

<400> 222

cacacggagc	cacggaatct	cacaggtgtc	tgagaattcc	tectcctggg	actctcagag	60
gatccagaac	tgtgtccggt	cctcgctttg	ctgtccctgt	ccctgtccat	gtatctggtc	120
atggtgctga	ggaacctgct	cagcatcctg	gctgtcagct	ctgactcccc	tccacacccc	180
cgtgtacttc	ttcctctcca	acctgtgctg	ggctgacatc	ggtttcacct	cgcccacggg	240
tcccaagatg	attgtggaca	tgcagtcgca	tagcagagtc	atctctcatg	cgggctgcct	300
ggcacagatg	tctttcttgg	tcctttttgc	atgtatagaa	gacatgtctc	tgactgtgat	360
ggcctatgac	agctttgtag	ccatctgtca	ccctctgcac	taccagtcac	tcatgaatcc	420
tcacctctgt	gtcttcttgc	ttttgggtgc	ctttttcctt	agcctgttgg	attcccagct	480
gcacggttgg	attgtgttac	aattcaccat	catcaagaat	gtggaaatct	ctaattttct	540
ctgtgacccc	tctcaacttc	tcaaacttgc	ctgttctgac	agcgtcacca	atagcatatt	600
catataattt	gatagtacta	tgtttggttt	tcttcccatt	tcagggatcc	ttttgtctta	660
gtataaaatt	gtccccctca	ttctaaggat	gtcatcgtea	gatgggaagt	ataaagcctt	720
caccacctgt	ggctctcacc	tagcagttgt	ttgctgattt	gatggaacag	gcattggcat	780
gtacctgact	tcagctctgt	caccaccccc	caggaatggg	gtggcggcgt	cagtgatgta	840
cgctgtggtc	acccccatgc	tgaacctttt	catctacagc	ctgagaaaca	gggacataca	900
aagtgcctgt	cggaggctgc	gcagcagaac	agtggaaatc	catgatctgt	tccatccttt	960
ttcttgtgt						969

<210> 223

<211> 945

<212> DNA

<213> Unknown (H38g72 nucleotide)

<220>

<223> Synthetic construct

<400> 223

atggcctgga	gcaatcagtc	tgcggttaacc	gaattcatatc	tacgggggtct	gtccagttct	60
ttagaactcc	agatttttcta	cttctctgtt	ttctccatag	tctatgcagc	cactgtgctg	120
gggaaccttc	ttattgtggt	caccattgca	tcagagccac	accttcattc	ccctacgtac	180
tttctgctgg	gcaatctctc	cttcattgac	atgtccctgg	cctcatttgc	cacccccaaa	240
atgattgcag	acttccttag	agaacacaaa	gccatctctt	ttgaaggctg	catgacccag	300
atgttcttcc	tacatctctt	aggggggtgct	gagattgtac	tgctgatctc	catgtccttt	360
gataggtacg	tggctatctg	taagcctcta	cattaccta	caatcatgag	ccgaagaatg	420
tgtgttgggc	ttgtgatact	ttcctggatt	gtcggcatct	tccatgctct	gagtcagtta	480
gcatttacag	tgaatctgcc	cttctgttga	cccaatgaag	tagacagttt	cttttgtgac	540
ctccctttgg	tgattaaact	tgttgtgtgc	gacacatata	ttctgggggt	gttcatgac	600
tcaaccagtg	gcatgattgc	cctgggtgtgc	ttcatcctct	tggtgatctc	ttacactatc	660
atcctgggtca	ccgttcggca	gcgttcctct	gggtggatcct	ccaaagccct	ctccacgtgc	720
agtgccact	ttactgttgt	gaccttttct	tttggcccat	gcactttcat	ttatgtgtgg	780
cctttcacaa	atttcccaat	agacaaagta	ctctcagtat	tttataccat	atacactccc	840
ctcttgaatc	cagtgatcta	taccgttagg	aataaagatg	tcaagtattc	catgaggaaa	900
ctaagcagcc	atatctttta	atctaggaag	actgatcata	ctcct		945

<210> 224

<211> 963

<212> DNA

<213> Unknown (H38g73 nucleotide)

<220>

<223> Synthetic construct

<400> 224

atgaaaaagt	acatggaaag	gactaattga	acaactgagt	ttgagttgat	tctcataagt	60
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ctatgagtag	tcataagttg	acaaaaactc	ctttttgtca	catgcttagt	gggtgatcta	120
gtgacctct	tggggaacag	aatacagatc	atcccaacac	tccttggttc	ccacctatat	180
ttatgccatg	gcaatccctc	cttcctggat	atcgggctta	cgtcctttt	actccctcta	240
tcctaataaa	cttcctatca	gagggaaaaa	aactctcttt	cacagattgt	attatacaaa	300
tgtctatctt	ctattccatg	gggtccacgg	agtgtgtgct	cctagcagtg	atggcatatg	360
ataactgtgt	gggtcatcagc	aaattcctga	gataccctct	catcataaat	aagggtgaata	420
aaataaaaaa	gggtgctttgt	gttttcatgg	ctactgtctc	ttatgaatta	ggattttctca	480
acagacaaaa	tgtatttaata	gttacatatg	aatgcacttt	tgtggaaaac	acatcattaa	540
tcatttttat	aaaatattac	agttaatggc	tctggcttgc	atagatattt	ccttgaatga	600
gaatataata	atattgggca	aagtaaactt	ttcattttact	ttattactac	cattttcagtt	660
ctttaatttc	agttttttat	attttcacca	tctatgctgt	attgaaatca	attcagctga	720
aggaaggaaa	aagggtctctt	ccacctgttc	agccacata	acagtgggtga	ttgtgtttca	780
ccggacaatc	ctcttcatgt	acataaagtc	aacatctaat	ggcactactt	cagagaaact	840
ggttgacctg	ttctgcgggg	tagtaatgct	catgctcaat	cttatcatct	atagcctggg	900
gaatatggag	gtgcttgggg	ttatgaagaa	attgatcagt	atgagtagac	cctggtgctg	960
gaa						963

<210> 225

<211> 974

<212> DNA

<213> Unknown (H38g74 nucleotide)

<220>

<223> Synthetic construct

<400> 225

cacacggagc	cacggaatct	cacaggtgtc	tgagaattcc	tcctcctggg	actctcagag	60
gatccagaac	tgcagccggg	cctcgctttg	ctgtccctgt	ccctgtccat	gtccatgtat	120
ctggtcacgg	tgtctaggaa	cctgtctcagc	atcctggctg	tcagctctga	ctcccaactc	180
cacacccccca	tgtactttct	cctctccaac	ctgtgctggg	ctgacatcgg	tttcacctcg	240
cccattggttc	ccaagatgat	catggacatg	cagtcgcata	gcagagtcac	ctctcatgcy	300
ggctgcctga	cacggatgtc	ttctttgggc	ctttttgcat	gtatagaaga	catgctcctg	360
actgtgatgg	cctatgactg	ctttgtagcc	atctgtcgcc	ctctgcaacta	cccagtcac	420
atgaatcctc	acctctgtgt	cttcttcggt	ttgggtgctc	ttttccttag	cctgttggat	480
tcccagctgc	acagtttagat	tgtgtttacaa	ttcactttct	tcaataatgt	ggaaattgct	540
aatttttgtct	atgagccatc	tcaacttctc	aaccttgact	gttctgacac	cgtcacatca	600
agcgtatttta	tatatattcga	tagtactgtt	tgggttttct	cccatttcag	ggatcctttg	660
tcttagtata	aaattgtccc	ctccattcta	aggatgtcat	cgtcagatgg	gaagtataaa	720
gccttcgccca	cctgtggctc	tcacctagca	gttgtttgct	gatttgatgg	aacaggcatt	780
ggcatgtacc	tgacttcagc	tgtgtcacca	ccccccagga	atgggtgtggc	ggcgtcagtg	840
atgtacgctg	tggtcacccc	catgctgaac	cttttcatct	acagcctgag	aaacaggagc	900
attcaaagtg	ccctgcagag	gctgagtagc	agaacagtgg	aatctcatga	tctgttccat	960
cctttttctt	gtgt					974

<210> 226

<211> 957

<212> DNA

<213> Unknown (H38g75 nucleotide)

<220>

<223> Synthetic construct

<400> 226

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gaggtggagc	tgtgtctcct	gggtgctcctg	ctgcccacgt	tcctgctgac	tcttctgggg	120
aacctgtctc	tcattctccac	tgtgtctgtcc	tgtctccgcc	tccacacccc	catgtacttc	180
ttctttgtgca	acctctctat	cctggacatc	ctcttcacct	cagtcactctc	tccaaaagtg	240
ttggccaact	taggatctag	ggataaaacc	atctcctttg	ccggatgtat	cacccagtg	300
tattttctact	ttttcttggg	cacagttgag	ttcctcctgc	tgacgggtcat	gtcctatgac	360
cgttatgcca	ccatctgctg	ccccctgcgg	tacaccacca	tcatgagacc	ttctgtctgc	420
attgggaccg	ttgtattctc	tgggtgggga	ggcttcctgt	ctgtgctctt	tccaaccatc	480

ctcatctccc	agctgccctt	ctgtggctcc	aatatcatta	accacttctt	ctgtgacagt	540
ggacccttgc	tggccctggc	ctgtgcagac	accactgcca	tcgagctgat	ggattttatg	600
ctttcttcca	tggtcactct	ctgctgcata	gtccctcgtg	cctattccta	tacgtacatc	660
atcttgacca	tagtgcgcat	tccttctgca	agtggaagga	agaaggcctt	taataacctgt	720
gcttcccacc	tgaccatagt	catcattcct	agtggcatca	ctgtgtttat	ctatgtgact	780
ccctcccaga	aagaatatct	ggagatcaac	aagatccctt	tggttctgag	cagtgtgggtg	840
actccattcc	tcaaccctt	tatatatact	ctgaggaatg	acacagtgca	gggagtcctc	900
agggatgtgt	gggtcaggg	tcgaggagtt	tttgaaga	ggatgagggc	agtgtctg	957

<210> 227

<211> 939

<212> DNA

<213> Unknown (H38g76 nucleotide)

<220>

<223> Synthetic construct

<400> 227

atggaaactg	caaattacac	caaggtgaca	gaatttgctc	tcaactggcct	atcccagact	60
cgggaggtcc	aactagtcct	atttgttata	tttctatcct	tctatttgtt	catcctacca	120
ggaaatatcc	ttatcatttg	caccatcagg	ctagaccctc	atctgacttc	tcctatgtat	180
ttctctgttg	ctaactctggc	cctccttgat	atttgggtact	cttccattac	agcccctaaa	240
atgctcatag	acttctttgt	ggagaggaag	ataatttctc	ttggtggatg	cattgcacag	300
ctcttcttct	tacactttgt	tggggcttcg	gagatgttct	tgctcatagt	gatggcctat	360
gaccgctatg	ctgctatctg	ccgacccctc	cactatgcta	ccatcatgaa	tcgacgtctc	420
tgctgtatcc	tgggtggctct	ctcctggatg	gggggcttca	ttcattctat	aatacaggtg	480
gctctcattg	ttcgacttcc	tttctgtggg	cccaatgagt	tagacagtta	cttctgtgac	540
atcacacagg	ttgtccggat	tgccctgtgcc	aacaccttcc	cagaggagtt	agtgatgatc	600
tgtagttagt	gtctgatctc	tgtgggtgtg	ttcattgtct	tgtaaatgtc	ctatgccttc	660
cttctggcct	tgctcaagaa	acatttcaggc	tcagatgaga	ataccaacag	ggccatgtcc	720
acctgtctatt	cccacattac	cattgtgggtg	ctaattgttg	ggccatccat	ctacatttat	780
gctcgcccat	ttgactcatt	ttccctagat	aaagtgggtg	ctgtgtttca	tactgtaata	840
ttccctttac	ttaatcccat	tattttacaca	ttgagaaaca	aggaagtaaa	ggcagccatg	900
aggaaggtgg	tcaccaaata	tattttgtgt	gaagagaag			939

<210> 228

<211> 940

<212> DNA

<213> Unknown (H38g77 nucleotide)

<220>

<223> Synthetic construct

<400> 228

atggaaaagtc	aaaggaacat	ataaaaaattc	atactcatga	gcctttctct	tatccagaac	60
atacaaatat	ttgtttttgt	gttcttattt	tgtaatgttg	ccatcttggg	gggaaacttt	120
ctgatccctta	tctctatttg	atgtagtcct	ctttttaacc	aaccaatgca	ctatttcttc	180
aggctatatg	aatatctact	atacctcctg	tgtcacaccc	aaaataattg	gtgatctagt	240
agtgggaaga	ataaacatct	cctatgatag	gagtccttcc	catgcacttc	tttggaatca	300
ttgaaatctt	catccttaca	gtcatggcct	ttgatcacta	tggtgccatc	tgcaaacctc	360
cccgtacctt	aattatcatg	aataggacaa	aatacaatac	tctaactctg	gttgcttggc	420
tggtggggct	ttccattctt	tgtttcagtt	ttctatgaaa	atctgggttg	ctttctgtgg	480
ctccaacaaa	gttgatgact	aatattaaga	tatttttctc	ttactgaaag	tcgcttgtag	540
tgatacctgc	atcactgggt	tcctcgtggg	tgccaattct	ggaatgtttg	ccttggtaac	600
cttggtctgt	cgtttggctc	ttatgtcatt	atactattcc	ccttaaaaaa	tcattcagta	660
gaggggaagat	gcaaagccct	ctctacctgt	ggatctcata	tcaccatggg	aatctttttc	720
ttcgaacctt	caatctttgc	ctaccttaga	ccttctcact	tttcttgagg	acaaaaatct	780
tgctctgttt	tacactatta	ttgctccaat	gttcaaccac	ctaacttata	acctgagaaa	840
tacagagatg	aaaaaggcca	tgagaaaagt	ttggtaccaa	atatcatttt	cagaagaaaa	900
acagctgatt	tgtcctactt	agtgtactaa	agaactttat			940

<210> 229
 <211> 912
 <212> DNA
 <213> Unknown (H38g78 nucleotide)

<220>
 <223> Synthetic construct

<400> 229
 atgagaaatg gcacagtaat cacagaattc atcctgctag gctttcctgt tatccaaggc 60
 ctacaaacac ctctctttat tgcaatcttt ctcacctaca tattaaccct tgcaggcaat 120
 gggcttatta ttgccactgt gtgggctgag cccaggctac aaattccaat gtacttcttc 180
 ctttgtaact tgtctttctt agaaatctgg tacaccacca cagtcacccc caaactgcta 240
 ggaacctttg tagtggcaag aacagtaatc tgcattgctt gctgcctgct gcaggccttc 300
 ttccacttct tcgtgggcac caccgagttc ttgatcctca ctatcatgtc ttttgaccgc 360
 tacctcacca tctgcaatcc ccttcaccac cccaccatca tgaccagcaa actctgcctg 420
 cagctggccc tgagctcctg ggtgggtggg ttcaccattg tcttttgta gacgatgctg 480
 ctcatccagt tgccattctg tggcaataat gttatcagtc atttctactg tgatgttggg 540
 cccagtttga aagccgcctg catagacacc agcatttttg aactcctggg cgtcatagca 600
 accatccttg tgatcccagg gtcacttctc tttaatatga tttcttatat ctacattctg 660
 tccgcaatcc tacgaattcc ttcagccact ggccaccaa agactttctc tacctgtgcc 720
 tcgcacctga cagttgtctc cctgctctac ggggctgttc tgttcatgta cctaagacct 780
 acagcacact cctcctttaa gattaataag gtgggtgctg tgctaaatac tatcctcacc 840
 ccccttctga atccctttat ttatactatt agaaacaagg aggtgaaggg agccttaaga 900
 aaggcaatga ct 912

<210> 230
 <211> 963
 <212> DNA
 <213> Unknown (H38g79 nucleotide)

<220>
 <223> Synthetic construct

<400> 230
 atgacaattc ttcttaatat cagcctccaa agagccactt tcttcctgac gggcttccaa 60
 ggtctagaag gtctccatgg ctggatctct attcccttct gcttcatcta cctgacagtt 120
 atcttgggga acctcaccat tctccacgtc atttgtactg atgccactct ccatggacct 180
 atgtactatt tcttgggcat gctagctgtc acagacttag gcctttgcct tccacactg 240
 cccactgtgc tgggcatttt ctggtttgat accagagaga ttggcatccc tgcctgtttc 300
 actcagctct tcttcatcca caccttgtct tcaatggagt catcagttct gttatccatg 360
 tccattgacc gctacgtggc cgtctgcaac ccactgcatg actccaccgt cctgacacct 420
 gcatgtattg tcaagatggg gctaagctca gtgcttagaa gtgctctcct catcctcccc 480
 ttgccattcc tcctgaagcg cttccaatac tgccactccc atgtgctggc tcatgcttat 540
 tgtcttcacc tggagatcat gaagctggcc tgccttagca tcattgtcaa tcacatctat 600
 gggctctttg ttgtggcctg caccgtgggt tgggactcac tgctcatctt tctctcatac 660
 gccctcatcc ttcgcaccgt gctcagcatt gcctccacc aggagcgact cccagccctc 720
 aacacctgtg tctctcatat ctgtgctgta ctgctcttct acatccccat gattggcttg 780
 tctcttgtgc atcgctttgg tgaacatctg ccccgctgtg tacacctctt catgtcctat 840
 gtgtatctgc tggatccacc ccttatgaac cccatcatct acagcatcaa gaccaagcaa 900
 attcgccagc gcatcattaa gaagtttcag ttataaaagt cacttaggtg tttttggaag 960
 gat 963

<210> 231
 <211> 968
 <212> DNA
 <213> Unknown (H38g80 nucleotide)

<220>
 <223> Synthetic construct

<400> 231

atggggaacc	acaccaccgt	caccgagttt	gtcctgctgg	ggctctcaga	gacctgtgag	60
ctgcagatgc	tcatcttcc	ggggctctc	ctgacctacc	tcctcacact	gctggggaat	120
ctggatcatg	tggatcatc	cctcatggac	aggcgctcc	acaccacat	gtactacttc	180
ctccgcaact	ttgctgtccc	ggagatctgg	ttcacctcg	tcatcttcc	caaggtgctg	240
gccaacatcc	tcacaggata	caagaccatt	ccctcccagg	ctgcttcctg	caaagtgtgc	300
tctatTTTTT	cttgggcacc	acagagttct	tcctcctggc	ggtgatgtcc	tttgacaggt	360
acgtggccgt	atgtaacct	ttgcattatg	ccaccatcat	gagcaaaagg	gtctgtgtcc	420
agctagtcc	ctgttagtgg	atgacaggat	tccttctcat	cattattcca	agttttcttg	480
tccttcagca	gccattctgt	ggccccaaca	tcattaacca	tttcttctgt	gacaacttcc	540
ccctcttgaa	actcatttgt	gcagacatga	ctctgataga	gtcctgggt	tttgttatag	600
ccaacgtcag	cttactgggc	actctgtcta	tgacggccac	ttgctatggc	cacatcctcc	660
acgccattct	gcacatcccc	tcagccaaag	agaagcagaa	agccttctcc	gcctgctcct	720
cccacatcat	tgctgtgtct	ctcttctatg	gcagctgcat	cttcatgtac	attcagtcag	780
gcaagagtga	ccagaaggaa	gacaggaaca	aggtggcggc	attgcttaac	accgtgggtga	840
ccctgatgct	caacccttc	atctacacc	tgaggaacaa	acaggtgaaa	caggtgttta	900
ggcagcaggt	gagcaaac	ctcatataaa	gctgtgtaaa	aaaaaaactg	aagctcagca	960
tccccaga						968

<210> 232

<211> 949

<212> DNA

<213> Unknown (H38g81 nucleotide)

<220>

<223> Synthetic construct

<400> 232

gaaataaaga	tagcaaacaa	cacagtagtg	acagaattta	tcctccttgg	tctgactcag	60
tctcaagata	ttcagctctt	ggtctttgtg	ctgatcttaa	ttttctacct	tatcatectc	120
cctggaaatt	tcctcatcat	tttcaccata	aagtcagatc	ctgggctcac	agcaccctcc	180
tatttctttc	tgggcaactt	ggccttcctg	gatgcatect	actccttcat	tgtggctccc	240
cggatgttgg	tggacttctt	ctctgcgaag	aatgtaatct	cctacagagg	ctgcatcact	300
cagctctttt	tcttgcactt	ccttgaggga	ggagagggat	tactccttgt	gatgtagcct	360
ttgaccgcta	catcgccatc	tgccggcctc	tgcactatcc	tactctcatg	aaccccagag	420
cttgctatgc	aatgatgttg	gctctgtggc	ttgggggttt	tgtccactcc	attatccagg	480
tggtcctcat	cctcgccttg	cctttttgtg	gccccaaaca	gctggacaac	ttcttctgtg	540
atgtcccaca	ggtcatcaag	ctggcttgca	ccgacacgtt	tgtgggtggag	cttctgatgg	600
tcttcaacag	tggcctgatg	acaactcctg	ctttctgggg	cttctggcct	cctatgcagt	660
catcctgtgc	catgttcgta	aggcagcttc	tgaattgaag	aacaaggcca	tgtccacgtg	720
caccactcat	gtcattatta	tacttcttat	gtttggacct	gctatcttca	tctacatgca	780
ccccttcagg	gccttaccag	ctgacaagg	ggtttcttcc	tttcacacag	tgatctttcc	840
attgatgaat	cctatgattt	atacccttcg	aaaccaggaa	gtgaaaactt	ccatgaagag	900
gttattgagt	cgacatgtag	tctgtcaagt	ggactttata	ataagaaac		949

<210> 233

<211> 857

<212> DNA

<213> Unknown (H38g82 nucleotide)

<220>

<223> Synthetic construct

<400> 233

gtcatagcaa	accagacaat	ggtaactgaa	ttcaccgggt	ctcccttctt	gctgtccagg	60
agcttcagat	ttggctatgt	gtccttctct	ggctggttca	tatgctcacc	ataacaggaa	120
accttttctg	cattttctta	acgtggacag	ataattgtct	ccaaacccca	atggacttgt	180
tccttagaaa	aaagtcatat	cgttctctgg	ctgcatcacc	caaataatatt	tctacttctt	240
tctagggaca	gtggcgttta	tccccttggc	agtgacatcc	ttcaaact	gcatggcaac	300
ctgtgacccc	ctgtgcagca	ccatcattgc	aaaaagcagg	gcctgcctcc	tgctggctct	360
gggatgctgg	atgggaacct	tcctggctgt	gttgccgctg	actattgtgg	tgtccaggtt	420

gccagactgt	actgaaaaaa	ttagtccctt	cttctgtgac	attgcctctt	tactgcaggt	480
ggcctgtatt	gatattcatt	tcattgagat	gataagcttc	ctttgatcat	ctcttatggt	540
cctgacctcg	ctggtgctta	atgccacatc	ctacgcctac	atcattttctc	cctcctgtgc	600
atccccctcag	cccaaggatg	tcaggaggcc	ttttccacct	gtgcttcaca	catcaccatc	660
atctttattg	cctgccgaaa	ctccatctcc	acgtgtgtga	ggcctaaccc	gagggtattag	720
ctggattttg	acaaagtgac	agctatcctc	actatagtag	tgacttcttt	tctgaatccc	780
cgcattttata	gcttgaggta	aagggaagtat	gaagggagtc	aatttgcaca	atactgtcac	840
cacattccaa	aggaaca					857

<210> 234

<211> 921

<212> DNA

<213> Unknown (H38g83 nucleotide)

<220>

<223> Synthetic construct

<400> 234

atggaaagcg	agaacagaac	agtgataaga	gaattcatcc	tccttggtct	gaccagctct	60
caagatattc	agctcctggg	ctttgtgcta	gttttaatat	tctacttcat	catcctccct	120
ggaaattttc	tcattatttt	caccataaag	tcagaccctg	ggctcacagc	ccccctctat	180
ttctttcttg	gcaacttggc	cttcctggat	gcctcctact	ccttcactgt	ggctccccgg	240
atgttggtgg	acttccctctc	tgcgaagaag	ataatctcct	acagaggctg	catcactcag	300
ctctttttct	tgcacttccct	tggaggaggg	gagggattac	tccttggtgt	gatggccttt	360
gaccgctaca	tcgccatctg	cgggctctg	cactatccta	ctgtcatgaa	ccctagaacc	420
tgctatgcaa	tgatgttggc	tctgtggctt	gggggttttg	tccactccat	tatccagggtg	480
gtcctcatcc	tcgcttgcc	ttttgtggc	ccaaaccagc	tggacaactt	cttctgtgat	540
gtcccacagg	tcataagct	ggcctgcacc	gacacatttg	tgggtggagct	tctgatggtc	600
ttcaacagtg	gcctgatgac	actcctgtgc	tttctggggc	ttctggcctc	ctatgcagtc	660
attctttgtc	gcatacgagg	gtcttcttct	gaggcaaaaa	acaaggccat	gtccacgtgc	720
atcacccata	tcattgttat	attcttcatg	tttggacctg	gcattctcat	ctacacgcgc	780
cccttcaggg	cttcccagc	tgacaagggtg	gtttctctct	tccacacagt	gatttttctt	840
ttgttgaatc	ctgtcattta	tacccttcgc	aaccaggaag	tgaaagcttc	catgaaaaag	900
gtgtttaata	agcacatagc	c				921

<210> 235

<211> 927

<212> DNA

<213> Unknown (H38g84 nucleotide)

<220>

<223> Synthetic construct

<400> 235

atggaaaatc	aaaacaatgt	gactgaattc	attcttcttg	gtctcacaga	gaacctggag	60
ctgtggaaaa	tattttctgc	tgtgtttctt	gtcatgtatg	tagccacagt	gctggaaaat	120
ctacttattg	tggttaactat	tatcacaagt	cagagtctga	ggtcacctat	gtattttttt	180
cttaccttct	tgtccctttt	ggatgtcatg	ttctcatctg	tcgttgcccc	caagggtgatt	240
gtagacaccc	tctccaagag	cactaccatc	tctctcaaag	gctgcctcac	ccagctgttt	300
gtggagcatt	tctttgggtg	tgtggggatc	atcctcctca	ctgtgatggc	ctatgaccgc	360
tacgtggcca	tctgtaagcc	cctgcactac	acgatcatca	tgagtccacg	gggtgtgctgc	420
ctaattggtg	gaggggcttg	ggtgggggga	tttatgcacg	caatgataca	acttctcttc	480
atgtatcaaa	tacccttctg	tggctctaatt	atcatagatc	actttatatg	tgatttggtt	540
cagttgttga	cacttgcctg	cacggacacc	cacatcctgg	gcctcttagt	taccctcaac	600
agtgggatga	tgtgtgtggc	catctttctt	atcttaattg	cgtcctacac	ggtcataccta	660
tgctccctga	agtcttacag	ctctaaaggg	cggcacaaaag	ccctctctac	ctgcagctcc	720
cacctcacgg	tggttgtatt	gttctttgtc	ccctgtatct	tcttgtagat	gaggcctgtg	780
gtcactcacc	ccatagacaa	ggcaatggct	gtgtcagact	caatcatcac	acccatgtta	840
aatcccttga	tctatacact	gaggaatgca	gaggtgaaaa	gtgccatgaa	gaaactctgg	900
atgaaatggg	aggctttggc	tgggaaa				927

<210> 236
 <211> 933
 <212> DNA
 <213> Unknown (H38g85 nucleotide)

<220>
 <223> Synthetic construct

<400> 236
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 cggctatcat caccttatct actaatattc tgtactgaca tgtgtaccat ttcagtttac 120
 atattctcat atagtaaaat gtttaactgca aggggaattta cctcaaacc aaaccattaa 180
 cgtaacttca gagacaatat ggattaagat tatccatgat ttccttcattg aaccaagac 240
 tatctccttt gagggctgca tggccagat attcttggtc catgtctttg ctggtggtga 300
 gatggtgctc cttgtagcca tggcatatga catatatgta gccatatgca aacctctcca 360
 ttatgcaacc atcatgaact tgtgcacatg tacaggccta gtggtaggat cttgggtcac 420
 tggagttatg cactccctga gccagtttag tttcactgta agtttgccct tctgtggccc 480
 aaacatagtg gacagttatt attgtgacct tactttggtc atcaaacttg cctgtacaga 540
 tacttatatc cctgaagcgt tgatgctttt ggacagtggc cttatggggg tgacttcatt 600
 ttgcttttgc tgatctccta cacggtcatt ctgattactg tgcagcgacc ttcctcagca 660
 ggtatggcca aggctcgcag cactctgact gccacgtga ctgtggtgac cctgttcttt 720
 gggccttgta tcttcatcta tgccctggcc ttcagcaact taccagtga taacattttg 780
 tctgtattct ctacagtttt cacacctata ttaaaccctt ttatctacac actgagaaac 840
 aaagaggtaa aatcagcaat tcataacctg aagaccagt atgtaacttc caggctgtct 900
 tcccagctct ctctcatagg actagatttg ttg 933

<210> 237
 <211> 629
 <212> DNA
 <213> Unknown (H38g86 nucleotide)

<220>
 <223> Synthetic construct

<400> 237
 ttgggaaatg tctcaacaga gactactttt atttttgttt gtttcacaaa tggacaacaa 60
 ttccagcctg tatgcttctc ctcattttta gtgcttgccc actcagtgtc tgggctaagt 120
 tctctcctca acatcctggg gaacttgctc tcagcttggt tctctttgtt ttgtttttc 180
 agatgtccta ctcctttgtc attttaatta aaatgataat gaactctata tctgagaggt 240
 acatcaccac taatttgaag tgcaagatc tgcccttgct tttatctgct ttgctatcag 300
 tgagcactct aatacttttg gcttggggtc actgtgggat ctgtgtgcct caggctgtgt 360
 ctctgacgat gcttggcctg cactggggta ggtattgatg gtgtcatggc ccaccagag 420
 gcaatgggtca gtctgtcttt ctgtgaccgc agcatcatca accactgtgt gtggcacact 480
 tcttttcata aaactctcct tagagcact gtttcacaag ctggtgattt ttagtgcatt 540
 gcgtagtgtg tgatcatctt catctctgac atactatcct ttccaccatc ctccattttc 600
 tctttcctga ggcaaaactca aaagctttt 629

<210> 238
 <211> 822
 <212> DNA
 <213> Unknown (H38g87 nucleotide)

<220>
 <223> Synthetic construct

<400> 238
 atgggggaatc tgggcatgat catggtcatc aggatcaacc ccaaactcca caccctatg 60
 tactttttcc tcagccactt gtcctttgtt gatttctgtt attccaccac aattacacca 120
 aaactgctgg agaacttggt tggggaagac agaatcatct ccttcacagg atgcatcatg 180
 caattcttct ttgctgtat atttgtggtg acagaaacat tcatgctggc agcgatggct 240
 tatgacagat ttgtggcagt gtgtaaccct ctgctttaca cagttgcaat gtcccagagg 300

ctttgtctct	tgtagtggt	tgcatacat	tcttgaggt	tagtttggt	cttaacatac	360
acatactttt	tgtagacttt	atctttttgt	aggactaact	tcattaataa	ctttgtctgt	420
gagcacgtcg	ccattgttgc	tgtgtctctg	tctgacccct	acatgagcca	gaaggtcatt	480
ttagtttctg	caacattcaa	tgaaataagc	agcctggtga	tcattctcac	ttcctatgct	540
ttcattttta	tcaactgtcat	gaagatgcct	tccactgggg	ggcgcaagaa	agcgttctcc	600
acgtgtgcct	cccacctgac	cgccattacc	atcttccatg	ggactatcct	ttttctctac	660
tgtgttccca	actccaaaag	ttcatggctc	atgggtcaagg	tggcctctgt	cttttacaca	720
gtgggtcattc	ccatgctgaa	ccccttgatc	tatagcctca	ggaacaaaga	tgtaaaagag	780
acagtcagga	agtttagtcat	taccaaatta	ttatgtcata	aa		822

<210> 239

<211> 1041

<212> DNA

<213> Unknown (H38g88 nucleotide)

<220>

<223> Synthetic construct

<400> 239

atgaccaaca	gcagtgtcaa	gggagacttc	atcctgggtg	gtttctctca	tcagccccac	60
ctggaaaaga	tctcttttgt	ggctgttttg	atatectatc	tccttaccct	tgtgggaaat	120
acagtaatta	ttctgatctg	ctctgtagac	cctaaactca	agacacccat	gtattttttc	180
ttactcacct	ctccttagtt	gatatactgt	ttaccaccag	tattgtcccc	cagctgctgt	240
ggaacctaaa	aggacctgac	aaaacaatca	cattcctggg	ttgtgtcatc	cagctctaca	300
tctccctggc	attgggctcc	actgagtgtg	tctcctggc	tgtaatggct	tttgatcgct	360
atgctgcagt	ttgcaaacct	ctccactata	ccgctgtaat	gaaccctcag	ctgtgccagg	420
ttctggcagg	ggttgctgtg	ctgagtggag	tgggaaacac	tcttatccag	ggcactgtca	480
ccctctggct	tcctcgctgt	ggacaccgat	tgctccaaca	tttcttctgt	aggtaccctc	540
catgattaag	cttgcatgtg	tggacatcca	tgataatgag	gttcagctct	ttgttgcttc	600
actggctctg	ctcctcttgc	ccttagtgct	aatactgctg	tcctatggac	atatagccaa	660
ggtggctcata	aggatcaagt	cagtcacagg	ctgggtgcaa	ggcctgggga	catgtggatc	720
ccatttgata	gtagtgtccc	tcttctgtgg	gaccatcaca	gctgtctaca	tccagtccaa	780
cagttcttat	gcccagtctc	atgggaagtt	catctccctc	ttctatacac	ttgtgacccc	840
gaccttcaat	cctctcatct	acacactgag	gaataatgac	gtgaaaggag	cactgcgatt	900
atttaacaga	gacttaggca	cataaaaaat	gaagcagagt	acacagcgct	caactttttt	960
cacaaagcaa	ctttaaaggt	catcttgtat	aatttttcac	tcaagaactt	tgccagtctg	1020
taaaggaaga	gatgtaatct	t				1041

<210> 240

<211> 957

<212> DNA

<213> Unknown (H38g89 nucleotide)

<220>

<223> Synthetic construct

<400> 240

atggataagt	ccaattcttc	agtgggtgtc	gaatttgtac	tgttgggact	ctgtagttct	60
caaaaactcc	agcttttcta	tttttgtttc	ttctctgtgt	tgtatacagt	cattgtgctg	120
ggaaatcttc	tcattatcct	cacagtgact	tctgatacca	gcctgcactc	ccctatgtac	180
tttctcttgg	gaaacctttc	ctttgttgac	atctgtcagg	cttctttttg	taccctaaa	240
atgattgcag	atcttctgag	tgcacacgag	accatatctt	tcagtggctg	catagcccaa	300
atcttcttta	ttcacctttt	tactggaggg	gagatgggtg	tacttgtttc	gatggcctat	360
gacaggtatg	tagccatatg	caaaccctta	tactatgtgg	tcacatgag	ccgaaggaca	420
tgcactgtct	tggtaatgat	ctcctgggct	gtgagcttgg	tgcacacatt	aagccagtta	480
tcatttactg	tgaacctgcc	tttttgtgga	cctaattgtag	tagacagctt	tttttgtgat	540
cttcctcgag	tcaccaaact	tgccctgcctg	gactcttaca	tcattgaaat	actaattgtg	600
gtcaatagtg	gaattctttc	cctaagcact	ttctctctct	tggtcagctc	ctacatcatt	660
attcttgtta	cagtttggct	caagtcttca	gctgcaatgg	caaaggcatt	ttctacgctg	720
gcttccata	ttgcagtagt	aatattatct	tttggacctt	gcactcttcat	ctatgtgtgg	780
ccctttacca	tctctccttt	ggataaattt	cttgccatat	tttacctgt	tttaccctcc	840

gtcctaaacc ccattattta tacactaagg aatagggata tgaaggctgc cgtaaggaaa 900
attgtgaacc attacctgag gccaaaggaga atttctgaaa tgtcactagt agtgaga 957

<210> 241

<211> 935

<212> DNA

<213> Unknown (H38g90 nucleotide)

<220>

<223> Synthetic construct

<400> 241

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ccgggactcc	agatccccgc	cttcttcctg	tttctaggtt	tctacgcggt	cacgggtggtg	120
gggaacctgg	gcttgataat	cctgataggg	ctcaactctc	gcctgcatat	ccccatgtac	180
tttttccctt	tcaacttgtc	cttcatagat	tttagttatt	ccactaccct	cgccccataa	240
atgctgatga	gctttgtctc	agagaacatc	atttcctatg	cagggtgtat	gactcagctt	300
tttttcttct	gtttctttgt	cttttctgaa	tcctatatcc	tatcagcgat	ggcgtatgac	360
cgctacgtgg	gcactctgta	cccactgttg	tacacgggtc	ccatgtctcc	ccagatgtgt	420
ttgtctcctt	tactgggtgt	ctatgggatg	gggatttttg	ggctgtgggt	catatgggaa	480
acataatgtt	tatgtccttt	tgtggagaca	accttggtcaa	tcactatatg	tgtgacatcc	540
ttcctctcct	tgagctctcc	tgcaacagct	cttacataaa	tttgtctggg	gtttttatta	600
ttgtgacctg	tggcattggg	gtgccgattg	tcaccatttt	tctctcttat	ggttttattc	660
tttccagcat	tctccacatt	agttccacag	agggcagggtc	taaagccttc	agtacctgca	720
gttccacat	aattgtggta	tcgcttttct	ttgggtcagg	tgctttcatg	tacctcaaac	780
caccttctat	tctacccctg	gaccagggga	aagtgtctct	cattttttgt	actgctgtgg	840
tgcccatgtt	taaccatta	atctacagcc	tgaggaataa	agatgtcaaa	gttgccctga	900
ggagaacctt	ttgcagaaaa	ttagtctctt	aaaaa			935

<210> 242

<211> 1071

<212> DNA

<213> Unknown (H38g91 nucleotide)

<220>

<223> Synthetic construct

<400> 242

atgaattggg	taaataagag	tgtccacag	gagttcattc	tgtagttttt	ctcagatcaa	60
ccatggctag	agattccacc	ctttgtgatg	tttctgtttt	cctatatctt	gacaatcttt	120
ggcaatctga	caataattct	tgtgtcacat	gtggatttca	aactccacac	ccctatgtac	180
ttttttctta	gcaatctctc	actcctggac	ctttgtctata	ccacaagtac	agttccacaa	240
atgctggtaa	acatatgcaa	caccagggaa	gtaatcagtt	atggtggctg	tgtggccag	300
cttttcatct	tcctggcctt	gggttccaca	gaatgtcttc	tcctggccgt	catgtgcttt	360
gataggtttg	tagctatttg	tcggcctctc	cattactcaa	ttatcatgca	ccagaggctc	420
tgcttccagt	tggcagctgc	atcctggatt	agtggcttta	gcaattcagt	attacagtcc	480
acctggacac	ttaagatgcc	actgtgtggt	cacaaagaag	tggatcactt	cttctgtgaa	540
gtccctgtct	tgctcaagtt	gtcctgtgtt	gacacaacag	caaagtgggc	tgaactattc	600
ttcatcagtg	tgctattcct	tctaataccc	gtgacactca	tccttatatc	gtatgctttt	660
attgtccaag	cagtgttgag	aatccagctc	gctgaagggtc	aacgaaaggc	atttgggaca	720
tgtggctccc	atctaattgt	gggtgtcactt	ttttatggta	cagctatctc	catgtacctg	780
caaccacctt	caccagctc	caaagaccgg	ggaaagatgg	tttctctctt	ctgtggaatc	840
attgcaccca	tgctgaatcc	ccttatatat	acacttagga	acaaagaggt	aaaggaagcc	900
tttaaaagg	tggttgcaaa	gagtcttctt	aatcaagaaa	taagaaatat	gcaaatgata	960
agctttgcta	aagacacagt	gcttacttac	cttactaact	tctccgcaag	ttgtcctatt	1020
tttgtcatta	ctatagaaaa	ctattgtaat	ctccctcaaa	gaaaatttcc	t	1071

<210> 243

<211> 959

<212> DNA

<213> Unknown (H38g92 nucleotide)

<220>

<223> Synthetic construct

<400> 243

cacacagagc	cacggaatct	cacaggagcc	tgagaactcc	tcctcctggg	actctcagag	60
gatccagaac	tgcagcccat	cctcgctggg	ctgtccctgt	ccatgtatct	ggtcacgggtg	120
ctgaggaacc	tcctcatcag	cctggctgtc	agctctgact	cccacctcca	caccccaatg	180
tgcttcttcc	tctccaacct	gtgctgggct	gacatcggtt	tcacctcggc	cacggttccc	240
aagatgattg	tggacatgcg	gtcgcatagc	ggagtcacat	cttatgcgga	ctgcctgaca	300
cggatgtctt	tcttggtcct	ttttgcatgt	gtagaagaca	tgctcctgac	tgtgatggcc	360
tatgactgct	ttgtagccat	ctgtcgccct	ctgcactacc	cagtcacgt	gaatcctcac	420
ctctgtgtct	tcttagtttc	ggtgtccttt	tccttagcct	gttggattcc	cagctgcgca	480
gttggattgt	gttgcaattc	accttcttca	agaatgtgga	aatctctaata	tttgtctgtg	540
acccatctca	acctctcaag	cttgccctgtt	ctgacagcat	catcgatagc	atgttcatat	600
atttcgatag	tactatgttt	ggttttcttc	ccatttcagg	gacccctttg	tcttactata	660
aaattgtccc	ctccattcta	aggatttcat	cgtcagatgg	gtagtataaaa	gccttctccg	720
ctgtggctc	tcacctgcca	gttggttgct	tattttatgg	aacaggcatt	ggcgtgtacc	780
tgacttcagc	tgtggcacca	ccctcagga	atggtgtggt	ggcgtcagtg	acgtatgtcg	840
tggtcacccc	catgctgaac	cctttcatct	acagcctgag	aaacagggac	attcaaagcg	900
ccctgtggag	gctgcgccagc	agaacagtca	aatctcatga	tctgttccat	cctttttct	959

<210> 244

<211> 939

<212> DNA

<213> Unknown (H38g93 nucleotide)

<220>

<223> Synthetic construct

<400> 244

atggaggggt	tcaactgttc	cagagtatct	gaattcatgt	tacttggact	tactgattct	60
cctgaactcc	agagattctt	ttttgtggta	ttttctgtct	tctatttaat	gaccatgttg	120
ggcaactgcc	tgattttgct	cactgtgcta	tccacctcac	accttcactc	tcccatgtac	180
ttcctgctca	gcaacctgtc	tctcattgac	atgtgcctgt	cctcctttgc	cacaccaaag	240
atgattatgg	acttttttgc	tctgcgtaag	accatctctt	ttgaaggctg	catttctcag	300
atcttttttt	gcacctcttc	accgggactg	agattgtgct	gctgatctcc	atgtcttttg	360
acaggatata	tgccatatgt	aaacctctcc	attattcaac	aattatgagc	caaagagtgt	420
gtgttgagct	tgtggccgtt	tcttgagacg	tgggctttct	gcatacaatg	agccaattag	480
cttttaccct	ctatttgccc	ttctgtggtc	ccaatgttgt	agagtttttt	ctgtgatctt	540
cctttgggtca	tccagctagc	ttgtatggat	atztatgttc	ttgggatctt	catgatttca	600
actagtgggtg	tgattgtctt	tataagtttt	ctgcttttgc	tcacctccta	catcattgtt	660
cttattactg	tcagggaacta	ctcctccaca	ggatcctcca	aggctctttc	tacctgtaca	720
gcacatttta	ttgttgtggt	aatgttcttt	gggccctgta	ttttcattta	tgtgtggcct	780
tccacaaact	tcctggtaga	caaaattctc	tctgttttct	ataccatctt	cactcccttt	840
ctgaatccac	ttatctatac	tttgagaaac	caggaagtga	agacagcaat	gaagaagtaa	900
ctgaatatcc	agtatttcag	tcttgggaaa	actgctccg			939

<210> 245

<211> 1014

<212> DNA

<213> Unknown (H38g94 nucleotide)

<220>

<223> Synthetic construct

<400> 245

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acagatttca	tccttctggg	gttttctgat	cgaccccaat	tagagcacat	catctcagtg	120
gttgtcttca	tcattctatat	tgtgactctg	gtaggaaata	caaccatcat	tcttgtatct	180
tatctagaca	ccagctcca	taccttcag	tattttttct	tatccaattt	gtctttcttg	240

gacctctgtt	atacaactag	cattatcccc	cagatgctgg	caaatcaatg	gggccccaaa	300
aaatctatta	cttatggagg	gtgtgtactc	caattctttt	ttgtccttga	cttgggagcc	360
acagaatgtc	ttctgttggc	tgtgatggcc	tatgatcgtt	atgctgctgt	ctgtcaacct	420
cttcactaca	ccttaaaatg	caccctcagc	tttgccactg	cctgggttgag	tggctcttgcc	480
agtgccttaa	ttgtttgctc	cttgactttg	aagttgccaa	gatgtgggca	ccgggaagtg	540
gataatTTTT	tctgtgagat	gccagcattg	atcaagatgg	cttgtgtcta	ttcaaaagta	600
attgagattg	ttgtctttgc	tttcggagtg	gtatttcttt	tcgtacctct	atcactaatt	660
cttatctcat	atggagttat	cactcaagct	gtaatgagga	tcaagtcagc	aacaaggttg	720
caaaagatcc	ttaatacatg	tggctcccac	ctcacagtag	taattctgtt	ttatggaaca	780
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agatgtaaag	agtgcactga	agagaatact	gtggatgaaa	aaatcttcag	cagaatcatg	960
aattagatgg	aaaaaagtag	aatgtagagc	actaaagaaa	tattggcatt	tatc	1014

<210> 246

<211> 941

<212> DNA

<213> Unknown (H38g95 nucleotide)

<220>

<223> Synthetic construct

<400> 246

atgcaccaag	gaaattgaac	tactgtctct	aaattctttc	tcctgggaat	cacaacaaag	60
cctaaagagc	agcagtttat	cttcatgctg	tttctatgca	cgtatctggg	cactatggta	120
agaaatttac	ttatcactct	ggccgttgct	agtgatgctc	acctccatgg	ccccatatat	180
ttcttccttg	ccaatctatc	tttactaac	gtctgcatca	caaccactac	agtccccaaa	240
atcttggcag	atattcaaag	ccagaattca	accatatcct	ttgaaggatg	ccctgcacaa	300
atgtagtttt	aaatattcct	ggtggatctg	gataatttcc	tattggtaga	catggcatat	360
aattgatata	tgccatctg	tcaccatta	cactatatgt	ggtagtactg	agtcccaaga	420
actgtgccct	gttggttgtg	actccatggg	ttatctccaa	ccttgtctca	atactgcata	480
tcagtctgct	aagccactta	actttctgtg	atttcacata	tcttctatga	cctggaaccc	540
attttagggc	ttgcttgctc	agacacccaa	atcaacaact	tgataattac	tgccattggg	600
gaagtagtta	tcttcatccc	ctttaccttc	acattcttgt	ctcctatggc	cttattggca	660
gcactatgct	tggagtcca	tcagccaagg	ggaagtagaa	aacattctct	acatgtgggt	720
cccactcttc	agttgtgccc	caggtcttct	atgggttcat	cattggagtc	tactttctct	780
ccttttttgc	ctactcagca	gaaagggatg	aggtagctgc	tatcatgtat	acaactgtaa	840
ctcacttgat	caaatcattt	atctgtagtc	taaggaaacga	ggacatgaaa	ggagcactga	900
ggagaccact	cagcagacaa	ggtttttctg	gagtggtgag	c		941

<210> 247

<211> 941

<212> DNA

<213> Unknown (H38g96 nucleotide)

<220>

<223> Synthetic construct

<400> 247

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ctgagcagcg	gaatctgttc	tatgccttgt	tcttgccgt	gtatcttacc	accctcctgg	120
ggaacctcct	cgtcattgtc	ctcattegac	tggactccca	cctccacatg	cctatgtatt	180
tgtgtctcag	caacttgctc	ttctctgacc	tctgcttttc	ctcggtcaca	atgcccaaat	240
tgctgcagaa	catgcagagc	caaaacccat	ccatccccct	tgccggactgc	ctggctcaga	300
tgtactttca	tctgttttat	ggagttctgg	agagcttcct	ccttgtgggc	atggcttata	360
actgctatgt	ggetatttgc	tttctctgc	actacaccac	tatcatgagc	ccaagtgtt	420
gccttggct	gctgacactc	tcctggctgt	tgaccactgc	ccatgccacg	ttgcacacct	480
tgcttatggc	caggctgtcc	ttttgtgctg	agaatgtgat	tcctcacttt	ttctgtgata	540
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tcatggggcg	gctcactcct	gtcatcccat	tcctactcct	catcatgtcc	tgtgcaagaa	660
tcgtctccac	cactctcagg	gtcccttcca	ctgggggcat	ccagaaggct	ttctccacct	720

gtggccccca	cctctctgtg	gtgtctctct	tctatgggac	aattattggt	ctctacttgt	780
gcccatgac	gaatcataac	actgtgaagg	acactgtcat	ggctgtgatg	tacactgggg	840
tgaccacat	gctgaacccc	ttcatctaca	gcctgaggaa	cagagacatg	agggggaacc	900
ctgggcagag	tcttcagcac	aaagaaaatt	tttttgtctt	t		941

<210> 248

<211> 994

<212> DNA

<213> Unknown (H38g97 nucleotide)

<220>

<223> Synthetic construct

<400> 248

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ccgggactcc	aggtccccgt	cttcttctctg	tttctaggtt	tctacgcggt	cacgggtggtg	120
gggaacctgg	gcttgataat	cctgataggg	ctcaactctc	gcctgcatat	ccccatgtac	180
tttttccct	tcaacttgtc	cctcgtagat	tttagtttct	ctacgaccat	cattcccaaa	240
atgctgatga	gttttgtctc	aaggaagaac	attatttctt	tcacagggtg	tatgagtcag	300
ttcttcttct	tctgtttctt	tgtcttttct	gagtccttca	tcctgtcggc	gatggtgtag	360
gaccgctacg	tgggcatctg	taacccactg	ttgtacacga	tcaccatgtc	tccccagggtg	420
tgtttgctcc	ttttactggg	tgtctacggg	atgggggttt	ttggggctgt	ggctcataca	480
ggaaatatag	tgttttctac	cttttgtgca	gacaaccttg	tcaatcacta	catgtgtgac	540
atccttcccc	ttcttgagct	ctcctgcaac	ggctcttaca	taaagtctct	ggtcattctt	600
attgttgtga	ccgttggeat	tggggtgccc	attgttgccg	tttttatctc	ttatggtttt	660
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gtggtgcccc	tgtttaaccc	attaatctac	agcctgagga	ataaggatgt	caaacttgcc	900
ctgaagagaa	ccttttccag	aataagcttt	tcttgaaaaa	aatttttagaa	acagaaaaga	960
gatactagga	tttttttaaa	atcagattgc	tttt			994

<210> 249

<211> 942

<212> DNA

<213> Unknown (H38g98 nucleotide)

<220>

<223> Synthetic construct

<400> 249

atgtcgaatg	aggacatgga	acaggataat	acaacattgc	tgacagagtt	tgttctcaca	60
ggacttacat	atcagccaga	gtggaaaatg	cccctgttct	tggtgttctt	ggtgatctat	120
ctcatcacta	ttgtgtggaa	ccttggtctg	attgctctta	tctggaatga	cccacaactt	180
cacatcccca	tgtacttttt	tcttgggagt	ttagcctttg	ttgatgcttg	gatatcttcc	240
acagtaactc	ccaaaatggt	ggttaatttc	ttggccaaaa	acaggatgat	atctctgtct	300
gaatgcatga	ttcaattttt	ttcctttgca	tttgggtggaa	ctacagaatg	ttttctcttg	360
gcaacaatgg	catatgatcg	ctatgtagcc	atatgcaaac	ctttactata	tccagtgatt	420
atgaacaatt	cactatgcat	acggctgtta	gccttctcat	ttttaggtgg	cttcctccat	480
gccttaatte	atgaagtcct	tatattcaga	ttaaccttct	gcaattctaa	cataatacat	540
catttttact	gtgatattat	accactgttt	atgatttctt	gtactgaccc	ttctattaat	600
tttctaattg	tttttatttt	gtctggctca	attcagggtat	tcaccattgt	gacagttctt	660
aattcttaca	catttgcctc	tttcacaatc	ctaaaaaaga	agtctgttag	aggcgtaagg	720
aaagcctttt	ccacctgtgg	agcccatctc	ttatctgtct	ctttatatata	tggcccaact	780
atcttcatgt	atttgcgccc	tgcattctcca	caagcagatg	accaagatat	gatagactct	840
gtcttttata	caatcataat	tccttttgcta	aatcccatta	tctacagtct	gagaaataaa	900
caagtaatag	attcattcac	aaaaatggta	aaaagaaatg	tt		942

<210> 250

<211> 939

<212> DNA

<213> Unknown (H38g99 nucleotide)

<220>

<223> Synthetic construct

<400> 250

atggaggagg	aaaatctgac	cagcatctca	gaatgtttcc	tcctgggggt	ctctgagcag	60
ctggaggagc	agaagcccct	ctttgggtcc	ttcctgttca	tgtacttggg	cacgggtggca	120
ggcaacctcc	tcatcattct	agtcattcatt	actgacactc	aactccatac	ccccatgtac	180
ttctttctag	ccaacctctc	ccttgacagat	gcctgctttg	tgtccaccac	agtcacctaa	240
atgctggcaa	acatacagat	ccagagtcag	gccatctcct	actcagggtg	tctactacag	300
ttgtattttt	tcattgttatt	tgtgatgctg	gaggcattcc	tcttggcggt	catggcctat	360
gactgctacg	tggccatatg	ccaccacttt	cattacattc	tgatcatgag	ccctgggctc	420
tgcattctcc	tcgtgtctgc	atcctggatc	atgaatgccc	tccactccct	tctacacaca	480
cttctgatga	acagcctgtc	cttctgcgca	aaccatgaga	tcccacactt	cttctgtgac	540
atcaatcccc	tcctgagctc	gtcctgcaca	gaccccttca	ccaatgagct	gggtgatcttc	600
atcactgggg	gtctcacagg	actcatttgt	gtgctttggc	tgattatctc	ttacacgaac	660
gtttttctga	ccatcctgaa	gatcccatca	gctcaggggg	agcggaaaag	cttttccacc	720
tgcagctctc	atctctccgt	ggctctctct	ttctttggga	cttctttttg	tgttgatttc	780
agttctccct	caaccactc	ggcccagaag	gacacagttg	catcagtgat	gtacacagtg	840
gtaactccaa	tgttgaatcc	ctttatctac	agtttgagga	accaagaaat	aaagtcttcc	900
ctgagaaagt	taatctgggt	tcggaaaatt	cattcccct			939

<210> 251

<211> 931

<212> DNA

<213> Unknown (H38g100 nucleotide)

<220>

<223> Synthetic construct

<400> 251

atggaagagg	aaaatgcaac	attgctgaca	gagtttggtc	tcacaggact	tttatatcaa	60
ccacagtggg	aaataccctt	gttcctgaca	ttcttggtta	tatatctcat	caccatcatg	120
gggaatcttg	gtctgattgc	tgtcatctgg	aaagaccctc	accttcagat	cccaatgtac	180
ttactcctcg	ggaatttagc	ttttgtagat	gcttggatat	catctacagt	gactccaaag	240
atgctgaata	acttcttagc	taagagtaag	atggatcttc	tgctgaaag	caaaatacag	300
ttttttctgt	ttgcaatcag	tgtaaccact	gaatgttttc	tcttggcaac	aatggcatat	360
gatcgctatg	tagccatatg	caaaccctta	ctttatccag	ccattatgac	caatggactg	420
tgcattccgg	tatgtagggt	gtcttcttca	tgcttttaac	catgaaggat	ttttattcag	480
actaaccttc	tgtaactcca	acgtagtaca	ccacatttac	tgtgacatta	tcccattgtc	540
taagattttc	tgtactgatt	cttctattaa	ttttctaatg	gtttttatct	tctcaggttc	600
aattcaagtt	ttcaccattg	ggactgggtc	tatatcttat	acatttgtcc	tctttacaat	660
cttgaaaaag	aaatctgtca	aaggtataag	aaaagccttc	tccacctgtg	gagctcatct	720
cttatctgta	tctttatacc	atgggcccct	cgacttcatg	tatatgggct	ctgcatcccc	780
acaggctgat	gacgaagaca	tgatggagtc	tctattttac	actgtcatag	ttcctttatt	840
aaatcccatg	acctacagcc	tgagaaacaa	acaagtaata	gcttcattca	caaaaatggt	900
caaaagaaat	aatattttag	tctcttactc	a			931

<210> 252

<211> 690

<212> DNA

<213> Unknown (H38g101 nucleotide)

<220>

<223> Synthetic construct

<400> 252

ttctgtttgt	tcccagccac	agtcctcaag	gcagtgggtg	aatttttggc	agagacaatt	60
tcctttctct	attatgtgat	acaaatgctg	gtatttttgt	tctttgtgac	tactgaatgc	120
aatcttttag	cctccctggg	caaggacatt	tatatgccaa	tcagacaacc	catgctctat	180

cctgtcacta	tgtcccaagt	ttgttgatc	caattagtgg	cttcatgtta	cgggcatgga	240
gttatccata	ctatgttttt	aggaggttca	atctctatat	ttgccttttg	taagttcaaa	300
ccatcatcag	cttttttggt	gacagtttcc	cactcttggt	cctctcctgc	tcagacacct	360
acataatgaa	ttctttgttc	tttttcactg	ggtgcttcat	ttggatgagc	tcttgaccag	420
tcacacctgt	ctccacatg	ttcatcattg	tcactttctt	gaggatcttc	tcagttgtag	480
ttgaatctaa	agggtttctt	gctttttctt	cacatctaac	tgctatcatt	ctcttctatg	540
gggacattat	atztatatat	gtgacattct	tccaactatt	ttctgaacca	agaccagact	600
gtatccattt	tctacatggg	aagaattctt	ttgttaagcc	ccattatcta	ttgtttaata	660
aaaatgcaag	tgatttggtt	tcttgaaaat				690

<210> 253

<211> 647

<212> DNA

<213> Unknown (H38g102 nucleotide)

<220>

<223> Synthetic construct

<400> 253

cttttttttt	ttgtctgaca	cagcatcctg	acctgatagg	aaggagtaaa	agaaatttgg	60
tactttcagg	aattttctgac	atatccaaga	catagaaact	cctgtttgtc	tcttctcgca	120
tgtattatct	ctcaagaatt	ttcctaagga	ggacagtaaa	cattctatct	ctgcttaagg	180
ttatctcatt	gctttgttat	gggtcaaaac	tcagtttgtt	cattttttgt	gttactgcag	240
aatttttagct	tttgccctcc	aggatctgcc	attgctatat	tattatttgt	aaccattctt	300
ctaccaaat	ctcacattaa	aagcttttaa	tttcaattct	gacggctcat	tacaataaga	360
gagtatgtat	ttcaataaca	acatcaaaca	ctatgtctta	gctcttcttt	ggcagatcca	420
atgtggtgaa	caacttctct	gatcttctct	tgctcttaga	tttatectgc	acatttgtga	480
gtttctgac	tccatctcag	cttctctgac	atagtcctgg	tccccataat	tttatcattg	540
tggtcaatat	aaagatttag	ttagctgaag	ggaagcacia	agacttctct	atctgtccat	600
tataatttgc	tactgtcagc	aattttttta	tggcacacat	acatatt		647

<210> 254

<211> 936

<212> DNA

<213> Unknown (H38g103 nucleotide)

<220>

<223> Synthetic construct

<400> 254

ttcatggaaa	ataggaatat	tgtcactgtc	tttattctcc	tgggaactttc	tcaaaacaag	60
aacattgaag	tttttttggt	tgtattatct	gtattttgct	acattgctat	ttggatggaa	120
aacttcatca	taatgatttc	tatcatgtac	atthagctaa	ttgaccaacc	catgtatttc	180
ttccttaatt	acctcgact	ctcagatctt	tgctacatat	ccactgtggc	ccccaagcta	240
atgattgacc	tactaacaga	aaggaagatc	gtttcctata	ataactgcat	gatacagcta	300
tttatcactc	acttccttgg	agacattgag	atcttcatac	tcaaagcaat	ggcctatgac	360
cactacatag	ccatctgcaa	gcacctgcac	tacaccatca	tcacgacca	gcaaagctgt	420
aacaccatca	tcatagcttg	ttgtactggg	ggattttatac	actctgccag	tcagtttctt	480
cttaccatct	tcttaccgtt	ctgtggtctt	aatgagatag	atcagtactt	ctgctatgtg	540
tatcctctgc	tgaagtgggc	tgcatttgat	atatacagaa	ttggtttctt	ggtaattggt	600
aattcaggcc	tgatttcttt	gttggtcttt	gtgattttga	tggtgtctta	ttatttgata	660
ttatccacca	tcagggttta	ctctgctgag	agtcatacca	aagctctttc	aacctgtagc	720
tctcacataa	tagttgtggt	cctattcttt	gtgcctgccc	tcttcattta	catcagacca	780
gccataactt	ttccagaaga	taaagtgttt	gttctcttct	gtgccatcat	tgctcccatg	840
ttcagttctt	ttatctacat	gctgagaaag	gtggagatga	agaacgctgt	aaggaaaatg	900
tggtgtcact	aattgcttct	ggcaaggaag	taactt			936

<210> 255

<211> 924

<212> DNA

<213> Unknown (H38g104 nucleotide)

<220>

<223> Synthetic construct

<400> 255

atggccatgg	acaatgtcac	agcagtggtt	cagtttctcc	ttattggcat	ttctaactat	60
cctcaatgga	gagacacgtt	tttcacatta	gtgctgataa	tttacctcag	cacattgttg	120
gggaatggat	ttatgatctt	tcttattcac	tttgacccca	acctccacac	tccaatctac	180
ttcttcctta	gtaacctgtc	tttcttagac	ctttgttatg	gaacagcttc	catgccccag	240
gctttggtgc	attgtttctc	tacccatccc	tacctctctt	atccccgatg	tttggtcaa	300
acgagtgtct	ccttggtctt	ggccacagca	gagtgcctcc	tactggctgc	catggcctat	360
gaccgtgtgg	ttgctatcag	caatcccctg	cgttattcag	tggttatgaa	tggcccagtg	420
tgtgtctgct	tggttgctac	ctcatggggg	acatcacttg	tgctcactgc	catgctcacc	480
ctatccctga	ggcttcactt	ctgtggggct	aatgtcatca	accattttgc	ctgtgagatt	540
ctctccctca	ttaagctgac	ctgttctgat	accagcctca	atgaatttat	gacccctcacc	600
accagtatct	tcacctgct	gtaccacttt	gggtttgttc	tcctctccta	catacgaatt	660
gctatggcta	tcataaggat	tcgctcactc	cagggcaggc	tcaaggcctt	taccacatgt	720
ggctctcacc	tgaccgtggt	gacaatcttc	tatgggtcag	ccatctccat	gtatatgaaa	780
actcagtcca	agtcctaccc	tgaccaggac	aagtttatct	cagtgtttta	tggagctttg	840
acacccatgt	tgaacccct	gatatatagc	ctgagaaaaa	aagatgttaa	acgggcaata	900
aggaaagtta	tgttgaaaag	gaca				924

<210> 256

<211> 971

<212> DNA

<213> Unknown (H38g105 nucleotide)

<220>

<223> Synthetic construct

<400> 256

atggaagcag	aaaaccttac	agaattatca	gaattcctcc	tcttaggact	ctcagatgat	60
cctgaactgc	agcccgctct	ctttgggctg	ttcctgtcca	tgtacctggt	catgggtgctg	120
gggaacctac	tcatacatct	ggccgtcagc	tctgactccc	acctccacag	ccccatgtaa	180
ttcttcctct	ccaacttgtc	ctttgtggac	acctgtttca	tctgcaccac	agtccccaag	240
atgctagtga	acatccaggc	acggagcaaa	gacatctcct	acatgggggtg	cctcactcag	300
gtgtattttt	aaatgatggt	tgctggaatg	gatactttcc	tactggctgt	gatagcctat	360
gaccggtttg	tggccatctg	ccaccactg	cagtacatgg	tcatacataaa	cccccatctc	420
tgtggcctcc	tgggtctggc	atcttggttc	atcattttct	ggttctccct	ggttcataatt	480
ctactgatga	agaggctgac	cttctccaca	ggcactgaga	ttccgcattt	cttctgtgaa	540
ctggctcagg	tcctcaaggt	ggcccgtct	gatgctctcc	tcattaacat	tgtcttgtat	600
gtggccacgg	cactgctggg	tgtgtttcct	gtagctggga	tcctcttctc	ctactctcag	660
attgtctcct	ccttaatgag	aatgtcctcc	accgagggca	agtacaaagc	cttttccacc	720
tgtggatctc	acctctgtgt	ggctccttg	ttctatggaa	caggacttgg	ggtctatctg	780
agttctgctg	tgaccatttc	ttcccagagc	agctccatgg	cctcagtgat	gtacgccatg	840
gtcaccacca	tgctgaaccc	cttcatctac	agcctgagga	acaaggatgt	gaagggggcc	900
ctggggagac	tccttagcag	ggcagcctct	tgtctcttac	ggtacacaa	ctcagaacta	960
agaggatgct	a					971

<210> 257

<211> 873

<212> DNA

<213> Unknown (H38g106 nucleotide)

<220>

<223> Synthetic construct

<400> 257

atggaggggt	tcaactattc	cagagtatct	gaattcatgt	tacttggaact	tactgattct	60
cctgaactcc	agatattctt	ttctgtgggtg	ttttctgtct	tctatttaaat	gaccatgttg	120
ggcaactgcc	tgattttgct	cactgtccta	tcacctcac	accttcactc	tcgcatgtac	180

ttcctgctca	gcaacatgtc	tcattgacat	gtgcctgtcc	tcctttgcc	caccaaagat	240
gattatggac	ttttttgtc	tgcgtaacac	catctctttt	gaaggctgca	tttctcagat	300
ctttttttta	cacctcttca	atgggactga	gattgtgctg	ttgatctcca	tgtcttttga	360
caggtatatt	gccatatgta	aacctctcca	ctattcaaca	attatgagcc	aaagagtgtg	420
tgttgagctt	gtggcagttt	cttgttggac	agtgggcttt	ctacatacaa	tgagccaatt	480
agtttttccc	tctatttgcc	cttctgtgtt	cccaatgttg	tagacagttt	tttctgtgat	540
cttccttttg	tcattccagtt	agcttgtata	gatatttatg	ttcttgggac	ctccatgatt	600
tcaaccagtg	gtgtgattgc	tcttataagt	tttctgcttt	tgctcacctc	ctacatcatt	660
gttcttaata	ttgtcaggg	ctactcctcc	acaggatcct	ccaaggctct	ttctacctgt	720
acagcgcat	ttattgttgc	gttaatgttc	tttgggccct	gtattttcat	ttatgtgtgg	780
ccttcacaaa	acttctcgtg	agacaaaatt	ctctccgctt	tctataccat	cttcactccc	840
tttctgaatc	cacttatcta	tactttgaga	aac			873

<210> 258

<211> 985

<212> DNA

<213> Unknown (H38g107 nucleotide)

<220>

<223> Synthetic construct

<400> 258

tacacagagc	cacagaatct	cacaggtgtc	tcagaattcc	tcctcctggg	actctcagag	60
gatccagaac	tgcagccggt	cctcgctggg	ctgttccctgt	ccatgtacct	ggtcacgggtg	120
ctggggaacc	tgctcatcat	cctggctgtc	agctctgact	cccacctcca	cacccccatg	180
tacttcttcc	tctccaacct	gtccttggct	gacatcggtt	tcacctccac	cacgggtcccc	240
aagatgattg	tggacatgca	aactcacagc	agagtcacct	cctatgaagg	ctgcctgact	300
cagatgtcct	tttttgtcct	ttttgcatgt	atggatgaca	tgctcctgag	tgtgatggcc	360
tatgaccggt	ttgtggccat	ctgtcacccc	ctgcactacc	gaatcatcat	gaacccacgc	420
ctctgtggct	tcttaatctt	gttgtctttt	tttattagtc	ttttggactc	ccagttgcac	480
aatttgatta	tgttacagct	cacctgcttc	aaggatgtgg	acatttctaa	tttcttctgt	540
gaccttctc	aactcctcca	ccttaggtgt	tccgacacct	tcataaatga	aatggtcata	600
tatttcatgg	gtgccatatt	tggctgtctc	cctatctcag	ggatcctttt	ctcttactat	660
aaaattgttt	ccccattct	gagagtcca	acatcagatg	ggaagtataa	agccttctcc	720
acctgtggct	ctcacctggc	agttgtttgc	ttattttatg	gaacagggct	tgtagggtac	780
ctcagttcag	ctgtgttacc	atccccagg	aagagtatgg	tggcttcagt	gatgtacact	840
gtggtcaccc	ccatgctgaa	ccccctcatc	tacagcctga	ggaacaagga	cattcaaagt	900
gcctgttgca	ggctgcatgg	cagaatcatc	aaatctcatc	atctccatcc	tttttgttat	960
atgggataga	aatggcagca	aaatt				985

<210> 259

<211> 976

<212> DNA

<213> Unknown (H38g108 nucleotide)

<220>

<223> Synthetic construct

<400> 259

ctcaccatgc	cacacctcag	caacaccaca	tctgagttcc	caatcttccct	cctaacaggc	60
ttccctgggc	tggaggcctt	ccacatctgg	atctcaattc	ccttcttccct	tctgagcaca	120
gttgcctctc	tagggaacag	catgatccta	ttggttgcta	ttctggagcc	aaacctccat	180
gaacccatgt	actgttttct	cttcatgtcg	tctgccgtcg	acctggggct	gacctctcc	240
acaatgccc	cgacctcag	tgtcctctgg	ttcagtgcac	gtgaaatcat	cctcaatgca	300
tgtatcatcc	agctcttttt	cctccacagc	tctggcttta	tggaaatcctc	agtactgatg	360
gccatggctt	ttgaccgctt	tgttgccatt	tgcagacccc	tcagatatgc	taccatcctg	420
acagactcca	gaattctaaa	gattggtgta	gcaatagtcc	taagaacatt	gatcagcctc	480
tctccatccc	tctttctcat	taagagactg	tcattttgca	aagtcaatgt	cctttcccat	540
tcttactgct	tccacctga	tgcgcttaaa	gttgcattgt	ctgattcaag	gatgaacagc	600
tatggaggct	tagctgttct	cattctggtc	accgggggtg	gtacaccatg	tgttgcgctt	660
tcctacatcc	tgataatcca	ctctgtacta	aacatcatct	cttcagaggg	acggagggaag	720

gccttcgaca	cttgtggatc	tcacattggg	gcagttgcag	tcttctacat	tccttggtt	780
gttctttcag	ttgtccacag	atctttccac	aaggcttcac	caatatgtcc	acccactatt	840
gtccaacatc	tatttccttg	gccccctctg	gctgaacccc	atcatatata	gtgtgaagac	900
taaacaaatc	cgcagggcta	tcctcaaact	ctttcaaaca	aatcaaaaag	aaatgtaatg	960
ggggcttttc	ttcctg					976

<210> 260

<211> 884

<212> DNA

<213> Unknown (H38g109 nucleotide)

<220>

<223> Synthetic construct

<400> 260

atccaatgca	agggctaata	gaagtgaatt	aagacattct	ctgtaactcc	aatattaaat	60
ggaaaccggg	aaatagccag	attcctctcc	aacctgtcct	tggctggcat	cggtttcccc	120
tccaccatag	tctccaagat	gattgtggac	atccagtctc	acagcagagt	catctcctat	180
gcggtgtgcc	tgactcaggt	atctcttttt	gccgtttttg	gatgcatgga	agacatgctt	240
ctgagtgtga	tggcttatga	ccggtttgtg	gacatctgtc	accctctgga	ttatccagtc	300
atcatgaacc	catgtttctg	tggcttccta	gtttgttgtt	ctttttttct	cagtctttta	360
gactcccagc	tgacacaattg	gattgcctta	caaattacct	gcttcaagga	tgtggaaatt	420
cccaatttct	tctgtgacct	ttctcaacac	cccacccttg	cctgttgtga	caccttcacc	480
aatgacatag	tcattgtattt	ccttgctgcc	atatttggtt	ttcttcccat	ttcggggacc	540
ttttcatctt	actataaaat	tgtttcctcc	attctgaggg	tttcatcatc	aagtgggaag	600
tataaagcct	tctccacctg	tggtctctac	ctgtcagttg	tttgcttatt	ttatggaaaca	660
ggctttggag	gggacctcag	ttcagacatg	tcctcttatt	ccagaaaagg	tgcagtggcc	720
tcagtgatgt	acacggtggt	tactcccatg	ctgaaccctt	tcattctacag	cctaacaggg	780
aaattaaaag	tgccctgcgg	cagctgcact	gcagaatagt	ctaattctcat	tttcttatta	840
tctgttccat	tccttccgta	gtgtgagtta	gaaaaggcag	caag		884

<210> 261

<211> 959

<212> DNA

<213> Unknown (H38g110 nucleotide)

<220>

<223> Synthetic construct

<400> 261

tacacagact	cgcagaatct	cacagggtgtc	ttagaatttc	tcttctctggg	actctcagag	60
gatecagaac	tgcagcccgt	cctcggttggg	ctgttctgtt	ccatgtacct	gatcacggtg	120
ctggggaacc	tgctcatcat	cctggccgtc	agctgtgact	cccacctcca	cacccccatg	180
tacttcttcc	tctccaactt	gtccttgggt	gacatcggac	tcacctctgc	caccatccct	240
aagatgattg	ttgatatgca	atctcacagc	agaatcatct	cctatgaggg	ctgcctgatg	300
cagatgtctt	tatctatttt	gtgtgtatga	atgacatggt	cctgactgtg	atggcctatg	360
accagtttgt	ggccatttgt	cacccccctac	gctaccaggt	catcatgaat	ccccatctct	420
gtgtcttctt	agttttggtg	tcttttattc	ttagcctgtt	gaactcccag	ctgcacaatc	480
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catctcaact	tctcaacctt	gcctgttctg	acagtgtcat	caataacata	ttcatgtatt	600
tagatagtgt	tatatttggt	ttctttccca	tctcagggat	ccttttgtct	tactataaaa	660
ttgtctcctc	cattctaaaga	attccatcat	cagatgggaa	gtataaagcc	ttctccacat	720
gtggctctca	cctggcagtt	gtttgcttat	tttatggaac	aggacttggg	gcctacctca	780
gttcagctgc	gtcctctttc	cccaggaagg	gtgcggtcac	ctcagtgatg	tacactgtgg	840
tcattccctat	gctgaacccc	ttcatctaca	gcctgagaaa	cagggacatt	aaaagtgcc	900
tgtggaggct	gcacagcaga	acagtcta	ctcattatct	gttccatcct	ttctgtagt	959

<210> 262

<211> 955

<212> DNA

<213> Unknown (H38g111 nucleotide)

<220>

<223> Synthetic construct

<400> 262

cacacagagc	cacagaatct	cacaggtgtc	tcagaattcc	tcctcctggg	actctcagag	60
gatccagaac	tgcagccact	ccttgctggg	ctgttcctat	ccatgtgcct	ggtcacgatg	120
ctggggaacc	tgtcatcat	cctggccgtc	agccctgact	cccacctcca	catccccatg	180
tacttcctcc	tctccaacct	gtccttgcc	gacattgggt	tcaccttggc	cacgggtcccc	240
aagatgattg	tagacatgca	atcacatagc	agagtcattc	cccattgcagg	ctgtctgaca	300
cagatacctt	tctttgtcct	ttttgtatgt	atagatgaca	tgctcctgac	tgtgatggcc	360
tatgactgat	ttgtggccat	ctgtcacccc	ctgcactacc	cagtcattcat	gaatcctcac	420
ctctgtgtct	tcttagtggt	gatgtctttt	tccttagcct	gttggattcc	tagctgcaca	480
actggattgt	tacaattcac	ctgcttcaag	aatgtggaaa	tctctaattt	tttctgtgac	540
tgatctcaac	ttctcaacct	tgccgtgtct	gactgtcatc	agtaacatat	tcatacattt	600
agatagtact	atatttggtt	ttcttcccat	ttcagggatc	cttttgtcct	actataaaat	660
tgtgccctcc	attctaagaa	ttccattgtc	agatgggaag	tataaagcct	tctccacctg	720
tggtctctac	ctggcaattg	tttgcttatt	ttatggaaca	ggcattggca	tgtacctgac	780
ttcagctgtg	tcaccagccc	ccaggaattg	tgtggtggca	tcagtgttgt	acgctatggt	840
cacccccatg	ctgaaccctt	tcactgtcag	cctgagaaac	aggggcattc	aaagtgcctt	900
gtggaggctg	tgcaggagga	aagtctaate	tcattgatctg	tttcatcctt	tttct	955

<210> 263

<211> 1049

<212> DNA

<213> Unknown (H38g112 nucleotide)

<220>

<223> Synthetic construct

<400> 263

atgtcccaac	tgggaaggga	caacataaac	tgggtgagtg	agttcatcct	aatgggtctc	60
tccagtgaac	ggcagacca	ggctggactc	tttatcttat	ttggggctgc	ctacctgctg	120
accctgctgg	gcaatgggct	catcctgtct	ctgatctggc	tggacgtgag	actccacctg	180
cccattgtatt	tcttctctctg	caacctctca	cttgtgaaca	tctgctacac	ctccagcagg	240
gtccctcaga	tgctggtgca	ctgcaccagc	aaagaaagac	catctccttt	gcccgatgtg	300
ggacccagct	ctttttctcc	ctggccctcg	gggggaccga	gtttttgttg	ctggccgcaa	360
tggcctatga	ccgctacgtg	gctgtttgct	acccctgtg	ttacatagca	gtgatgagcc	420
caaggctctg	catggcactg	gcagctgtct	cttggctagt	gggcctggct	aattctgcta	480
tggagacggc	actgaccatg	cacctgcccc	cctgtgggca	caacgtgctg	aaccatgtgg	540
cctgtgagac	actggcactg	gtcaggctcg	cctgcgtgga	catcaccttc	aatcaggtgg	600
tcattagtggc	ctccagtgtg	gtggtgctgc	tgggtgcctg	ctgcctggtc	tcgctgtcct	660
acacctcat	tgtagtgtcc	gtcctgcaga	tccactccac	ccaggggcac	cgcaaggcct	720
ttgggacctg	tgccctccac	ctcactgtgg	tctccatatc	ctatgggatg	gccctcttta	780
cctacatgca	gcctcgctcc	atggcctcag	ctgagcagga	aaaggtgatg	gtactctctt	840
atgctgtggt	gacccccatg	ttgaatcctt	tcactctacag	tctgcggaac	aaggatgtga	900
aggcagctct	gagtcgagct	ctgatgagga	gctctgaatt	aaaacattag	agagtgggtt	960
gagtaacaag	aaggcctcac	tctgaaaaca	gtgggcattg	gactgtgctc	tccagtataa	1020
cgtgtgtacg	catgtgtgtg	tatgtgtgtg				1049

<210> 264

<211> 955

<212> DNA

<213> Unknown (H38g113 nucleotide)

<220>

<223> Synthetic construct

<400> 264

atggacagtc	ccagcaatgc	caccgtgccc	tgtggctttc	tccttcaagg	cttctccgaa	60
ttcccgcacc	tgagaccctg	gctcttcctt	ttgctgctgg	gggtgcacct	ggccacctg	120

ggcggaacc	tgctcatcct	ggtggccgtg	gcctcgatgc	caagccggca	gcccattgctg	180
ctcttcctgt	gccagctgtc	agccatcgag	ctgtgctaca	cgctgggtgg	ggtgccccgc	240
tccctggctg	acctgagcac	gccggggcca	ccgcaggggc	agccctatct	ccttcctgag	300
ctgcgccttt	cagatgcaga	tgtttgtggc	tctgggcggg	gccgagtget	tcttctgtggc	360
cgccatggct	aatgaccgct	acgtggccat	ctgccacccg	ttgcgctacg	cgccgtgggtg	420
acccccgggc	tgtgcgcgcg	actggctctg	gctgctgcct	caggggactg	gcgggtgtcgt	480
ggggctcacg	gtgccatctt	ccacctgcct	ttctgcgggt	cccgcctgct	gctgcacttc	540
ttctgcgaca	tcacggcgct	gctgcacctg	gcctgcacgc	ggactacgcc	gacgagctgc	600
ctctgctggg	cgccctgctg	gtgctgctgc	tgctgcccct	ggtgtctcatc	ctggcctctc	660
atggcgccat	cgccgcccgc	ctggcgccct	gcgctgcccc	aaaggccggg	gcaaggccgc	720
ctccacctgc	gccttgccac	tggcagtcac	cttctctgcac	tacggctgcg	ccaccttcat	780
gtacgtgcgg	cccagggcca	gctactcccc	gcgcctggac	cgcaccttgg	cgctgggtcta	840
caccaacgtc	acgcccgtgc	tgtgcccact	catctacagc	ctgcgcaacc	gcgagatcac	900
cggcgccctg	agcagggtgc	tggggcgccg	gcggccaggc	caagctccag	gcggg	955

<210> 265

<211> 945

<212> DNA

<213> Unknown (H38g114 nucleotide)

<220>

<223> Synthetic construct

<400> 265

atgggagact	ggaataacag	tgatgctgtg	gagcccatat	ttatcctgag	gggttttctc	60
ggactggagt	atgttcattc	ttggctctcc	atcctctctc	gtcttgcata	tttggttagca	120
tttatgggta	atgttaccat	cctgtctgtc	atttgatag	aatcctctct	ccatcagccc	180
atgtattact	ttatttccat	cttagcagtg	aatgacctgg	ggatgtccct	gtctacactt	240
cccaccatgc	ttgctgtggt	atgggttgat	gtccagaga	tccaggcaag	tgcttgctat	300
gctcagctgt	tcttcaccca	cacattcaca	ttcctggagt	cctcagtgtt	gctggccatg	360
gcctttgacc	gttttgttgc	tatctgccat	ccactgcact	acccaccat	cctcaccaac	420
agtgtaatg	gcaaaattgg	tttggcctgt	ttgctacgaa	gcttgggagt	tgtacttccc	480
acacctttgc	tactgagaca	ctatcactac	tgccatggca	atgccctctc	tcaegccttc	540
tgtttgcacc	aggatgttct	aagattatcc	tgtacagatg	ccaggaccaa	cagtatttat	600
gggctttgtg	tagtcattgc	cacactaggt	gtggattcaa	tcttcatact	tctttcttat	660
gttctgattc	ttaatactgt	gctggatatt	gcattctcgtg	aagagcagct	aaaggcactc	720
aacacatgtg	tatcccatat	ctgtgtgggtg	cttatcttct	ttgtgccagt	tattgggggtg	780
tcaatgggtc	atcgcttttg	gaagcatctg	tctcccatag	tccacatcct	catggcagac	840
atctaccttc	ttcttcccc	agtccttaac	cctattgtct	atagtgtcag	aacaaagcag	900
attcgtctag	gaattctcca	caagtttgtc	ctaaggagga	ggttt		945

<210> 266

<211> 869

<212> DNA

<213> Unknown (H38g115 nucleotide)

<220>

<223> Synthetic construct

<400> 266

tttcatggct	ggatttccat	gcccttttgc	tgtatttact	tgatgcctct	gctgagcaat	60
gctacaattc	tactgacaat	ctgggtctgat	cgtactcttc	gggaccctat	gttctacttt	120
ctagccatct	tatcagccat	agacctagcc	ctctcaacat	cctcagtgc	tcgtatgttg	180
ggtatcttct	ggtttgatgc	acataaaatt	ggctttggag	cctgggttagc	ccagatgttt	240
ctgatacaca	ctttcacagg	aatggagtcc	actgtgctgc	tggcaatggc	ctttgaccgc	300
tatgtggcca	tctgtacatc	actccactat	acctctactc	tgacaccccg	agtattggca	360
ggcattgggtg	tgagcattat	aatgcgcccc	gtcctgctca	tgttgcccct	tctctacctc	420
acccatcgtc	tgcccttctg	tgaggctcgg	attattggcc	actcctactg	tgagcacatg	480
ggtattgcta	agttggcctg	tgctagcatt	cacatcaatg	ctattttatg	gctttttgtg	540
gcttcttatt	ttggatgtcg	cacttggttg	aatctcctat	acctacattc	tccgagctgt	600
tttccacctc	ccatctcaag	acgtctgtca	caaagcactg	agaacgtgtg	gctcacatgt	660

tgggggtcatg	tgtgttttct	atacaccctc	cctctttctcc	ttcctcacct	accgatttcg	720
caaaaaaaaaat	tccccgttat	gtccacattc	ttgttgccaa	cctctatgtg	gtcattccac	780
ctgccctcaa	tcctattatc	tatggtgtga	gaaccaaaca	gattcatgag	catgtggtcc	840
atactttcac	ctcaaagtaa	ggtctctta				869

<210> 267

<211> 520

<212> DNA

<213> Unknown (H38g116 nucleotide)

<220>

<223> Synthetic construct

<400> 267

acatgctggg	ttttgatggt	gaacgtgggtg	aatgcctaca	cctgaggact	atcaggagcc	60
actttcaaca	ccatctgcac	at ttgccccg	ttctttctgtg	atgacaatta	gatcaaattc	120
tgccacatcc	tgccccgtct	gaagctcatt	tgaaatactt	caggaaacag	caagataatt	180
attgtgatct	ttgacagctt	ttatgattat	agctggcact	agggtcaccc	tgatctctta	240
cctgctaatac	atcagggctt	tgaggatgaa	atcatcgagt	ggcaaagcca	ataattttat	300
ccatccactt	gtgcctccca	cctaactgct	atgaccttcc	tttgggatcc	ccatcttcag	360
acatgtgaag	tacctcagat	aaatcactga	cagaagacaa	gttggcatca	tgacttgcac	420
catctttatt	cctatgctag	aacttttgat	caaagtcta	aagaaggata	tacaagttgc	480
cttcaaaaag	gccataggta	acttctgggt	ttttgagagg			520

<210> 268

<211> 952

<212> DNA

<213> Unknown (H38g117 nucleotide)

<220>

<223> Synthetic construct

<221> misc_feature

<222> (1) ... (952)

<223> n = A,T,C or G

<400> 268

attagcacaa	tgtctgtctt	caaaagttct	gcataaaaacc	ctcgtttctt	ccaaacgggc	60
ctctcaggcc	ttgaaagcag	atatgacttg	atttccctgc	ccatcttctt	ggtttatgcc	120
acctcaattg	ccgggaacat	tagcatcctc	ttcattatca	gaactgagtc	ttccctccac	180
caaccgatgt	attactttct	gtcaatgctg	gcattcactg	acctgggcct	atctaact	240
accttaccta	ccatgttcag	tgtctttctg	ttccatgccc	gggagatctc	cttcaatgct	300
tgtctgggtcc	aaatgtactt	cattcatggt	ttctcgatta	ttgagtcagc	tgtactcctg	360
gctatggcct	ttgactgctt	tatagcaatc	tgagaacctt	tgcgctatgc	agccatccta	420
accaatgatg	taatcattgg	gattggggtg	gcaattgctg	gaagggcctt	ggctctggtc	480
tttccagctt	ctttcctctt	gaagaggctt	caatatcatg	atgtcaatat	tctgtcctac	540
ctcttctgcc	tgcaccagga	cctcataaag	acgactgtat	ccaactgtcg	agtcagcagc	600
atctatggcc	tcattggtgg	catctgttcc	atgggacttg	attcagtgtc	tctcctcctc	660
tcctatgtcc	tcattcctgg	cacagcgttg	agtatagcct	ccaaggcaga	gagagtgaga	720
gccctcaata	cttgcactct	ccacatctgt	gctgtactca	ccttctatac	accaatgatt	780
gggctatcta	tgatccatcg	ctatggacag	aatgtctctc	aattgtccat	gtgctgatgg	840
ccaatgtcta	cttgntgggt	ccacctctca	tgaaccccg	gttctacagt	gtagaccag	900
ncagattcgt	gacagaatct	ttcaaataaa	attcagaaac	atgaagtgtg	ga	952

<210> 269

<211> 944

<212> DNA

<213> Unknown (H38g118 nucleotide)

<220>

<223> Synthetic construct

<400> 269

atggaagagg	aaaatgcaac	attactgaca	gaatttggtc	tcacaggatt	tttatgtcaa	60
caaggatttt	tatgggaaat	acccctgttc	ctggcattct	tggtaataga	tctcatcacc	120
atcatgggga	atcttgggtc	gattttttctc	atctggaaag	accctcacct	tcatattttca	180
atgtacttat	tccttgggag	tttagctttt	gtggatactt	ggttatcatc	cacagtgact	240
ccgaagatgc	tgatcaactt	cttagctaag	agtaagatga	tatctctctc	tgaatgcatg	300
gtacaatttt	ttttcccttg	caatcagtg	aaccacagaa	tgttttatct	cggcatcaat	360
ggcatatgat	cgctatgcag	acatatgcaa	acctttactt	tatccagtca	ttatgaccaa	420
tgaactatgc	atctggctat	ttgtcttgct	atttctaggt	ggcctttttc	atgctttaat	480
ccatgaaggt	tttttattca	gactaacctt	ctgtaactcc	aacatgatac	aacattttta	540
ctgtgacatt	atcccattgt	taaagatttc	atgtactgat	tcttgtatta	attttcta	600
gttttttatt	ttctcagggt	caattcaagt	tttaaccatt	gggattggtt	ttgtatctta	660
tatgtttgtt	ctctttacaa	tcttaaaaaa	gaagtctaac	aaaggcataa	gggaagcctt	720
ttccacctgt	ggagcccatt	acatacctct	ctctttatgt	tatggcctcc	ttctcttcat	780
gtatgtgggc	cctgcagctc	cacaagcaga	taatcaagat	atgatggagt	atctattttta	840
ccctatcatt	gtgcgtttgt	taaaccatat	tactacagcc	tgagaaataa	gcaataatag	900
gttcactcac	aaaaatgtta	aaataaaata	tttgcatgtc	atac		944

<210> 270

<211> 939

<212> DNA

<213> Unknown (H38g119 nucleotide)

<220>

<223> Synthetic construct

<400> 270

atgtccatta	tcaacacatc	atatgttgaa	atcaccacct	tcttcttggg	tgggatgcc	60
gggctagaat	atgcacacat	ctggatctct	atccccatct	gcagcatgta	tcttattgct	120
attctaggaa	atggcaccat	tctttttatc	atcaagacag	agccctcctt	gcattggccc	180
atgtactatt	ttctttccat	gttggctatg	tcagacttgg	gtttgtcttt	atcatctctg	240
cccactgtgt	taagcatctt	cctgttcaat	gccccgaaa	cttcttctag	tgctgtcttt	300
gcccaggaat	tcttcattca	tggattctca	gtactggagt	cctcagtcct	cctgatcatg	360
tcatttgata	gattccctagc	catccacaat	cctctgagat	acacctcaat	cctgacaact	420
gtcagagttg	cccaaattag	gatagtattc	tcctttaaga	gcattgtcct	ggttcttccc	480
ttccctttca	ctttaagaag	cttgagatat	tgcaagaaaa	accaattatc	ccatttctac	540
tgtctccacc	aggatgtcat	gaagtgggcc	tgttctgaca	acagaattga	tgttatctat	600
ggcttttttg	gagcactctg	ccttatggta	gactttatct	tcatttgctg	gtcttacacc	660
ctgatcctca	agactgtacc	gggaattgca	tccaaaaagg	aggagcttaa	ggctctcaat	720
acttgtgttt	cacacatctg	tgcagtgate	atcttctacc	tgcccatcat	caacctggcc	780
gttggtccacc	gctttgccc	gcattgtctc	ccccctatta	atgttctcat	ggcaaatgtt	840
ctctacttgg	tacctccgct	gatgaaacca	attgtttatt	gtgtaaaaa	ttaacagatt	900
agagtgaag	ttgtagcaaa	attgtgtcaa	tgggaagatt			939

<210> 271

<211> 940

<212> DNA

<213> Unknown (H38g120 nucleotide)

<220>

<223> Synthetic construct

<400> 271

atggaagaga	aaaatgcaac	attgctgaca	gagtttggtc	tcacattatt	tttatatcaa	60
cctcactgga	aaatacccc	gttcctggca	ttcttggtta	tatatctcat	caccatcttt	120
gggaatcttg	gtctgattgc	tgctgtagtg	aaagaccctc	accttcatat	cccaatatac	180
ttattccttg	agaatttagc	ttttgtggat	gatttggttat	catccacatg	actctgaaga	240
tgctgatcaa	cttcttcaat	aagagtaagt	tgatttctct	ctgaatgctg	gatacatttt	300
ttttcctttg	caattgggtg	aaccacagaa	tggtttatct	tggcaacaat	ggcatatgat	360
cgctatgtag	ccatatgcaa	acctttactt	tatccagtca	ttatgaccaa	tggactgtgc	420

atctggctat	taatcttgtc	atttctaggt	ggccttcttc	atgctttaat	tcatgaaggt	480
tttttataga	ttaaccttct	gtaattccaa	cacaatacat	cacttttaat	gtgacattat	540
cccatgttta	aaaattttct	gtactgattc	ttctattaac	tttccaatgg	tttttatttt	600
ctcatgttca	attcaagttt	tcaccattgg	gactgttctt	gtatcttata	catttgtcct	660
ctctacaatc	ttgaaaaaga	agtctgtcaa	aggcataaga	aaagacttct	ccacctgtgg	720
agctcatatc	ttacctgtat	ctttatacta	tgggcccctc	gccttcatgt	atgtgggctc	780
tgcaccccaa	cgggctgatg	accaagatat	gatggagtct	ctattttaca	ctgtcatagt	840
tcctttatta	aatcccatga	tctacagcct	gagaaataag	caagtaatag	attcattcac	900
aaaaatgttc	aaaggaaata	atgttttagat	ctcttactca			940

<210> 272

<211> 512

<212> DNA

<213> Unknown (H38g121 nucleotide)

<220>

<223> Synthetic construct

<400> 272

tgctgagtcc	aagtttctctg	agtagcagaa	aagtattgat	aaatttttatt	tgttgcaactt	60
tttaacaaaa	caaaaagcat	ctgccaacca	cagaacattg	caacacctag	gccctgggct	120
ttccccccagc	attcattcac	tagcacctca	tgttttgggg	gcacaagcac	agggctttct	180
taggctgtaa	aatcacctat	atcatctgtc	tgtccactgc	ttcaactcct	tctgcagtat	240
ccctgcaaca	atattacatg	cttatgaaat	gctgcagaca	gggaattcct	gtccttctag	300
gatcctcttc	tggctgtggg	cagctttacc	ataagttctt	gtcttcttat	gctgaaattg	360
atttcatttt	catcttcacg	tattattgct	tctttgctct	ctcgggtgctc	aactgagtct	420
catcgctctc	ccttctaata	ctccttctgt	catctatttt	gtcttttctt	cttcagactg	480
aaaatccctg	gtagtacctg	tagtttctct	cc			512

<210> 273

<211> 924

<212> DNA

<213> Unknown (H38g122 nucleotide)

<220>

<223> Synthetic construct

<400> 273

atgaatacca	ctctatttca	tccttactct	ttccttcttc	tgggaattcc	tgggctggaa	60
agtatgcata	tctgggttgg	ttttcctttc	tttgctgtgt	tcctgacagc	tgctcctggg	120
aatatcacca	tcctttttgt	gattcagact	gacagtagtc	tccatcatcc	catgttctac	180
ttcctggcca	ttctgtcate	tattgaccgg	ggcctgtcta	catccaccat	ccctaaaatg	240
cttggcacct	tctggtttac	cctgagagaa	atctcctttg	aaggatgcct	taccagatg	300
ttcttcatcc	acctgtgcac	tggcatggaa	tcagctgtgc	ttgtggccat	ggcctatgat	360
tgctatgtgg	ccatctgtga	ccctctttgc	tacacgttgg	tgctgacaaa	caaggtggtg	420
tcagttatgg	cactggccat	ctttctgaga	cccttagtct	ttgtcatacc	ctttgttcta	480
tttatacctaa	ggcttccatt	ttgtggacac	caaattattc	ctcatactta	tggtgagcac	540
atgggcattg	cccgccctgtc	ttgtgccagc	atcagggtta	acatcatcta	tggcttatgt	600
gccatctcta	tcctgggtctt	tgacatcata	gcaattgtca	tttcttatgt	acagatcctt	660
tgtgtctgat	ttctactctc	ttcacatgat	gcacgactca	aggcattcag	cacctgtggc	720
tctcatgtgt	gtgtcatggt	gactttctat	atgcctgcat	ttttctcatt	catgacccat	780
aggtttggtc	ggaatatacc	tcactttatc	cacattcttc	tggctaattt	ctatgtagtc	840
attccacctg	ctctcaactg	tgtaatattat	ggtgtcagaa	ccaaacagat	tagagcacaa	900
gtgctgaaaa	tgtttttcaa	taaa				924

<210> 274

<211> 927

<212> DNA

<213> Unknown (H38g123 nucleotide)

<220>

<223> Synthetic construct

<400> 274

atggaagagg	aaaatgcaac	attgctgaca	gagtttggtc	tcacaggatt	tttacaatcaa	60
cctgactgta	aaataccgct	cttcctggca	ttcttggtta	tatatctcat	caccatcatg	120
gggaatcttg	gtctaattgt	tctcatctgg	aaagaccctc	accttcatat	cccaatgtac	180
ttattccttg	ggagtttagc	ctttgtggat	gcttcgttat	catccacagt	gactccgaag	240
atgctgatca	acttccttagc	taagagtaag	atgatatctc	tctctgaatg	catgggtacaa	300
tttttttccc	ttgtaaccac	tgtaaccaca	gaatgttttc	tcttggaac	aatggcatat	360
gacgctatg	tagccatttg	caaagcttta	ctttatccag	tcattatgac	caatgaacta	420
tgcattcagc	tattagtctt	gtcatttata	ggtaggccttc	ttcatgcttt	aatccatgaa	480
gctttttcat	tcagattaac	cttctgtaat	tccaacataa	tacaacactt	ttactgtgac	540
attatcccat	tgtaaagat	ttcctgtact	gattcctcta	ttacttttct	aatgggtttt	600
attttcgcag	gttctgttca	agttttttacc	attggaacta	ttcttatatc	ttatacaatt	660
atcctcttta	caatcttaga	aaagaagtct	atcaaaggga	tacgaaaagc	tgtctccacc	720
tgtggggctc	atctcttata	tgtatcttta	tactatggcc	ccctcacctt	caaatatctg	780
ggctctgcac	ctccgcaagc	agatgaccaa	gatatgatgg	agtctctatt	ttacactgtc	840
atagttcctt	tattaaatcc	catgatctac	agcctgagaa	acaagcaagt	aatagcttca	900
ttcacaaaaa	tgttcaaaag	caatggtt				927

<210> 275

<211> 924

<212> DNA

<213> Unknown (H38g124 nucleotide)

<220>

<223> Synthetic construct

<400> 275

atggcgaata	gaaacaacgt	gacagagttt	attctattgg	ggcttacaga	gaatccaaaa	60
atgcagaaaa	tcataattgt	tgtgttttgt	catctacatc	accaccatga	taggaaatgt	120
gctcattgtg	gtcaccatca	ctgccagccc	atcattgagg	tcccccatgt	aatttttctt	180
ggcctatctg	tcctttattg	atgcctgcta	ttcctctgtc	aatgtctcta	agctgatcac	240
agattcactc	tatgaaaaca	agactatctt	actcaatgga	tgtatgactc	aagtctttgg	300
agaacatttt	ttcagagggt	ttgagggtcat	cctacttact	gtaatggcct	atgactgcta	360
tgtgggtcat	tgcaagccct	tgcgctatac	caccatcatg	aagcagcatg	tttgtagcct	420
gctagtggga	gtgtcacggg	tgggaggctt	tcttcatgca	accatacaga	tcctcttcat	480
cttccaatta	cctttctgta	gttctaattg	catagatcac	tttactgtga	tctcaaccct	540
ttgtctcaat	ttgcctgcac	taatacccac	actctaggac	tcttcgttgc	tgccaacagt	600
gggttcatat	gcctgttaaa	ctttctcttg	ctcctgggtc	cctatgtggt	catactgtac	660
tccttaagga	cccacagctt	agaggcaagg	cacaaaggcc	tctccacctg	tgtctcccac	720
aacacagttg	tcattcttatt	ctttataccc	tgcataattg	tgtacatgag	acctccagct	780
actttaccca	ttgataaagc	agttgctgta	ttctacacta	tgataactcc	tatgtttaaac	840
cccttaattc	acaccttgag	gaatgctcag	atgaaaaatg	ccattaggaa	attgtgtagt	900
aggaaagcta	tttcaagtgt	caaa				924

<210> 276

<211> 963

<212> DNA

<213> Unknown (H38g125 nucleotide)

<220>

<223> Synthetic construct

<400> 276

atgttccttc	ccaatgacac	ccagtttcac	ccctcctcct	tcctgttgct	ggggatccca	60
ggactagaaa	cacttcacat	ctggatcggc	tttcccttct	gtgctgtgta	catgatcgca	120
ctcatagga	acttcactat	tctacttgtg	atcaagactg	acagcagcct	acaccagccc	180
atgttctact	tcctggccat	gttggccacc	actgatgtgg	gtctctcaac	agctaccatc	240
cctaagatgc	ttggaatctt	ctggatcaac	ctcagagga	tcattcttga	agcctgcctc	300
accagatgt	tttttatcca	caacttcaca	cttatggagt	cagcagtcct	tgtggcaatg	360

gcttatgaca	gctatgtggc	catctgcaat	ccactccaat	atagcgccat	cctcaccaac	420
aagggttgtt	ctgtgattgg	tcttggtgtg	tttgtgaggg	ctttaatttt	cgtcattccc	480
tctatacttc	ttatattgcg	gttgcccttc	tgtgggaatc	atgtaattcc	ccacacctac	540
tgtgagcaca	tgggtcttgc	tcatctatct	tgtgccagca	tcaaaatcaa	tattatttat	600
ggtttatgtg	ccatttgtaa	tctggtgttt	gacatcacag	tcattgccct	ctcttatgtg	660
catattcttt	gtgctgtttt	ccgtcttcc	actcatgagc	cccgaactca	gtccctcagc	720
acatgtgggt	cacatgtgtg	tgtaatcctt	gccttctata	caccagccct	cttttctctt	780
atgactcatt	gctttggccg	aaatgtgccc	cgctatatcc	atatactcct	agccaatctc	840
tatgttggtg	tgccaccaat	gctcaatcct	gtcatatatg	gagtcagaac	caagcagatc	900
tataaatgtg	taaagaaaat	attattgcag	gaacaaggaa	tggaaaagga	agagtaccta	960
ata						963

<210> 277

<211> 894

<212> DNA

<213> Unknown (H38g126 nucleotide)

<220>

<223> Synthetic construct

<400> 277

atgagaaatc	acacaatggt	gactgaattc	atccttctcg	gaatccctga	gacagagggc	60
ctagagacag	cccttttatt	cctgttctcc	tcatthttatt	tatgcaccct	cttgggaaac	120
gtgcttatcc	ttacagctat	catctcctcc	actcgacttc	acactcctat	gtatthtttc	180
ttgggaaacc	tctccatctt	tgacctgggt	ttctcttcaa	cgactgttcc	caagatgttg	240
ttctaccctt	cggggaacag	ccatgctatc	tcgtatgcag	gctgcgtgtc	ccagcttttc	300
ttctaccatt	tcctaggctg	tactgagtgt	ttcctctaca	cagtgatggc	ctgtgaccgc	360
tttggttgcca	tatgttttcc	tttgagatac	acggatcatc	tgaaccacag	gggtgtgctt	420
atgttgggcca	cggggacctg	gatgattggc	tgtgtccatg	ccatgatcct	aactcccttc	480
accttccagt	taccttactg	tggccctaac	aagggtgggt	attacttctg	tgatattcct	540
gcagtggtac	ctctagcctg	taaggacaca	tccttagccc	agagggtagg	ttttacaaat	600
gttggtcttt	tgtctctcat	ttgctttttt	ctcatccttg	tttctatac	ttgcattggg	660
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gctcacctca	ctgcaatcct	ttgtgcttat	gggccagtca	tcgttatcta	tctacaaccc	780
aatcccagtg	ccttgcttgg	ttccataatt	cagatattga	ataatctggg	aaccccaatg	840
ttgaatccac	taatctatag	ccttaggaat	aaggatgtaa	aatcagatca	gccc	894

<210> 278

<211> 972

<212> DNA

<213> Unknown (H38g127 nucleotide)

<220>

<223> Synthetic construct

<400> 278

atggaggagg	aaaatacaac	attgctgaca	gagtttggtc	tcacaggatt	tttatatcaa	60
ccacagtggg	aaataccctt	gttcttgcca	ttcttggtta	tatagctcat	caccatcatg	120
gggaatcttg	gtctaattgt	tctcatctgg	aaagaccctc	accttcatat	cccaatgtat	180
ttattccgtg	ggagtttggc	ctttgtggat	gcttggttat	catccacagt	gactccaaag	240
atgctgatca	acttcttagc	taagagtaag	atgatattct	tctctgaatg	catggtacaa	300
tttttttctt	ttgtaatcag	tgttaaccaca	gaatgtttta	tctcggcatc	aatggcatat	360
gatcgctatg	tagccatttg	caaagcttta	ctttatccag	tcattatgac	caacggacta	420
tgcattccagc	tatttagtctt	gtcattttata	gggtggcctt	ttcatgcttt	aatccatgaa	480
attttttttat	tcagattaac	cttctgtaat	tccaacataa	tacaacactt	ttactgtgac	540
attatcccat	tgttaaatgat	ttctgttact	gattctttta	tttaactttct	aatgggtttt	600
atttttgcag	attcaattca	agtttttacc	attggaacta	ttcttatatc	ttatacactt	660
gtcctcctta	taatcttaaa	aaataagtct	gtcaaaggga	tacaaaaagc	tgtctccacc	720
tgtggagctc	atctctttat	tgtatcttta	tactatgggc	cccttgtctt	catgtatgtg	780
ggctctgcac	ccccgaagc	agatgaccaa	gatatgatgg	agtctctatt	ttacactgtc	840
atcgttcctt	tattaaattc	catgatctac	agcctgagaa	acaagcaagt	aatagcttca	900

ttcacaaaaa tgttcaaaag aaatgttttag atctcataca atctctgttc tctgtttact 960
 aaaattttcc ca 972

<210> 279

<211> 924

<212> DNA

<213> Unknown (H38g128 nucleotide)

<220>

<223> Synthetic construct

<400> 279

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gaataccggg	tgttcttatt	cagctgtttc	ctcttctctt	actctggggc	cctcacaggt	120
aatgtcctca	tcacettggc	catcacgttc	aaccttgggc	tccacgctcc	tatgtacttt	180
ttcttactca	acttggctac	tatggacatt	atctgcacct	cttccatcat	gccaaggcg	240
ctggccagtc	tgggtgcgga	agagagctcc	atctcctacg	ggggctgcat	ggcccagctc	300
tatttctctca	cgtgggctgc	atcctcagag	ctgctgctcc	tcacggtcac	ggcctatgac	360
cggtagcgag	ccatctgcca	cccgtgcat	tacagcagca	tgatgagcaa	ggtgttctgc	420
agcgggctgg	ccacagccgt	gtggctgctc	tgcgcctgca	acacggccat	ccacacgggg	480
ctgatgctgc	gcttggattt	ctgtggcccc	aatgtcatta	tccatttctt	ctgcgaggtc	540
cctcccctgc	tgcttctctc	ctgcagctcc	acctacgtca	acgggtgcat	gattgtcctg	600
gcggtatgctt	tctacggcat	agtgaacttc	ctgatgacca	tcgcgtccta	tggcttcctc	660
gtctccagca	tcttgaaggt	gaagactgcc	ctggggaggc	agaaagcctt	ctccacctgc	720
tcttcccacc	tcaccgtggg	gtgcatgtat	tacaccgctg	tcttctacgc	ctacataagc	780
ccggtctctg	gctacagcgc	aggggaagagc	aagtgtggctg	gcctgctgta	cactgtgctg	840
agtctaccc	tcaacccctt	catctatact	ttgagaaaca	aggaggtcaa	agcagccctc	900
aggaagcttt	tccctttctt	caga				924

<210> 280

<211> 958

<212> DNA

<213> Unknown (H38g129 nucleotide)

<220>

<223> Synthetic construct

<400> 280

atggatgacg	aaaatgcaac	attgctgaca	gagtttggtc	tcacaggact	tacatatcaa	60
tcagagtggg	aaatacccct	gttcctggca	ttcttggtta	tatatctcat	caccatcatg	120
gcaaatcttg	gtctgattgc	tgtcatctgg	aaagactcac	accttcacat	tccaatgtac	180
ttattccttg	ggagtttagc	ctttgtggat	gcttggttat	catcctcagt	gacccttaag	240
atgctgatca	gcttttttagc	taagagtatg	attattttctg	tctctgaatg	caagatacaa	300
tttttttctt	ttggaatcag	tggaaccaca	gaatgttttc	tcttggcaac	aatggcatat	360
gatcgctatg	tagccatatg	caaaccctta	ctttatccag	tcattatgac	caatggactg	420
tgtatctggc	tattagtctt	gtcattttata	ggtggctttc	ttcatgcctt	aattcatgaa	480
ggtattttat	tcagattaac	cttctgtaat	tccaacataa	tacatcactt	ttactgtgac	540
attatcccct	tgttaaagat	ttcctgtact	gacccttcta	ttaatttttt	aatgcttttt	600
attttgtctg	gttcaatata	ggtatttact	attttgactg	ttcttgtctc	ttatacattt	660
gtcctcttta	caatcttaaa	aaaaaaagtc	tgccaaagac	ataaggaaag	ccttttccac	720
ctgtggagcc	catctcttat	ctgtttcttt	atactatggc	ccccctctct	tcattgtatg	780
gcaccctgca	tctccacaag	cagatgatca	agatatggtg	gagtccttat	tttacactgt	840
cataattcct	ttcttaaatc	ccattatcta	cagcctgaga	aataagcaag	tcatagattc	900
actgacaaaa	acattaaaag	gaaatgttta	gatctcatat	tggaatgtat	tctctatt	958

<210> 281

<211> 933

<212> DNA

<213> Unknown (H38g130 nucleotide)

<220>

<223> Synthetic construct

<400> 281

atggttgaag	aaaatcatatc	catgaaaaat	gagtttatcc	tcacaggatt	tacagatcac	60
cctgagctga	agactctgct	gtttgtggtg	ttctttgcca	tctatctgat	caccgtggtg	120
gggaatatta	gtttggtggc	actgatattt	acacaccgtc	ggcttcacac	accaatgtac	180
atctttcttg	gaaatctggc	tcttgtggat	tcttgtctgt	cctgtgctat	tacccccaaa	240
atggttagaga	acttcttttc	tgagggcaaa	aggatttccc	tctatgaatg	tgcagtacag	300
ttttattttc	tttgcactgt	ggaaactgca	gactgctttc	ttctggcagc	agtggcctat	360
gaccgctatg	tgcccatctg	caaccactg	cagtaccaca	tcagtatgtc	caagaaactc	420
tgcattcaga	tgaccacag	cgccttcata	gctggaaatc	tgcattccat	gattcatgta	480
gggcttgtat	ttagggttagt	tttctgtgga	ttgaatcaca	tcaaccactt	ttactgtgat	540
actcttccct	tgtatagact	ctcctgtgtt	gaccctttca	tcaatgaact	ggttctattc	600
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tgtgcatccc	acttttcatc	agtttcatta	ttctatggat	ctattttttt	cctatacatt	780
agaccaaatt	tgcttgaaga	aggaggtaat	gatataccag	ctgctatttt	atttacaata	840
gtagttccct	tactaaatcc	tttcatttat	agtctgagaa	acaaggaagt	aataagtgtc	900
ttaagaaaaa	ttctgctgaa	aataaaatct	caa			933

<210> 282

<211> 979

<212> DNA

<213> Unknown (H38g131 nucleotide)

<220>

<223> Synthetic construct

<400> 282

tatacagacc	cacagaatct	aacagatgtc	tttatattcc	tcctcctaga	actctcagag	60
gatccagcac	tgcagctggt	cgtcactggg	ctgtgcctgt	gtgcctggtc	acggtgctgt	120
ggaacctgct	cagcatcctg	gccgtcagcc	ctgactccca	cctccacacc	cccatgcact	180
tcttctctctg	caacctgtcc	ttgcctgaca	tcggtttcac	ctccaccacg	gtccccaaga	240
tgatcgtgga	catccaatct	cacagcagag	tcattctcta	tgcaggctgc	ctgactcaga	300
tgtctctctc	tgccattttt	ggaggcatgg	aagagagaca	tgctcctgag	tgtgatggcc	360
tatgaccagt	ttgtagccat	ctgtcacccct	ctgtatcatt	cagccatcat	gaaccctgt	420
ttctgtggct	tcctggtttt	gttgtctttt	ttttctcagt	cttttagact	cccagctgca	480
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gacccttctc	aactccccca	tcttgcattg	tgtgacacct	tcaccaataa	cattatcatg	600
tattttccctg	ctgccatatt	tggttttctt	cccatctcgg	ggaccctttt	ctcttactat	660
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gtggtcaccc	ccatgctgaa	tcccttgatc	tacagcctga	gaaacagggg	tattaaaggt	900
gtcctgtggc	agccgtgcag	cgcacggcca	gcacagtctc	atctcaatat	cttatctgtt	960
ccattccttt	tgcaggatg					979

<210> 283

<211> 987

<212> DNA

<213> Unknown (H38g132 nucleotide)

<220>

<223> Synthetic construct

<400> 283

atggaaccac	agttcaccac	ccagggatca	atgtttgtcc	tgttagggta	gtcacagacc	60
caagagctcc	agagagtcac	gttcattctg	ttcctgttag	tctatgttac	caccattgtg	120
ggaaacctcc	ttatcatggt	cacagtgact	tttgactgcc	ggctccacac	ccatgtattt	180
tctgtccga	aatctagctc	tcatagacgt	ctgctattcc	acagtcacct	ctccaaagat	240
gctgggtggac	ttctccatg	agaccaagac	gatctcctac	cagggtctga	tggcccagat	300

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cttcttcttc caccttttgg gaggtggggac tgtctttttt ctctcagtca tggcctatga 360
ccgctacata gccatctccc agccctcccg gtatgtcacc atcatgaaca ctcaattgtg 420
tgtgggcctg gtagtagccg cctggcgtgg ggggctttgt ccactccatt gtccaactgg 480
ctgtgatacg tccacagcct ctatgtggcc ccaatatact agataacttc tactgtgatg 540
ttccccaagt actgagactt gcctgcactg atacctccct cctggagttc ctcatgatct 600
ccaacagtgg gctgctagtt atcatctggg tcctcctcag tctgatgtct tatactgtca 660
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ccaccacat catcgtgggtg tccatgatct tcattccatg tatctatatc tatacctggc 780
ccttttcccc cattcatcat ggacaaggct gtgtccatca gctacacagt catgaccccc 840
atgctcaacc ccatgatcta caccctgaga aaccaggaca tgaaagcagc catgaggaga 900
ttaggcaagt gcctagtaat ttgcagggag ttaacttta agtaagttga ctttaaataga 960
caaattgctc tggattttta ttttccc 987

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<210> 284

<211> 387

<212> DNA

<213> Unknown (H38g133 nucleotide)

<220>

<223> Synthetic construct

<400> 284

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atgcaaggag aaaacttcac catttggagc atttttttct tggagggatt ttcccagtac 60
ccagggttag aagtggttct ctctgtcttc agccttgtaa tgtatctgac aacgctcttg 120
ggcaacagca ctcttatttt gatcactatc ctagattcac gccttaaaac ccccatgtac 180
ttattccttg gaaatctctc tttcatggat atttgttaca catctgcctc tgcttctact 240
ttgctgggtga acttgcgtgc atcccagaaa accattatct tttctgggtg tgctgtacag 300
atgtatctgt cccttgccat gggctccaca gagtgtgtgc tcctggccgt gatggcatat 360
gaccgttatg tggccatttg taaccgg 387

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<210> 285

<211> 1005

<212> DNA

<213> Unknown (H38g134 nucleotide)

<220>

<223> Synthetic construct

<400> 285

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tctacagacc cacagaatct aacagatgtc tctatatctc tcctcctaga acctcagagg 60
atccagaacg gcagctgggc cttgctgggc tgttctctgc catgtgcctg gtcacgggtgc 120
tggggaacct gatcatcatc ctggacgtca gccctgactc ccacctcccc acccccatgt 180
acttcttctc ctccaacctg tccttgccctg acatcggttt cacctccacc acgggtcccca 240
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agatgtctct ctttgccatt tttggaggca tgggaagagag acacgctcct gagtgtgatg 360
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tgtttctgtg gctttctagt tttgttgtct ttttttttct tcagtctttt agacacccag 480
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ttctgtgacc cttctcaact cccccatctt gcatgtttgt acaccttcac caataacata 600
atcatgtatt tccctgctgc catatttggt tttcttcaga tctcggggac ccttttctct 660
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tacacggtgg tcacccccat gctgaacccc ttcattctaca gcctgagaaa cggggatatt 900
aaaagtgtcc tgcggcggcc gcaaggcagc aagggtcta atcaatatct tcttatctgt 960
tccattcctt ttgtagggtg ggttaaaaaa ggcagcaagg tcaaa 1005

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<210> 286

<211> 958

<212> DNA

<213> Unknown (H38g135 nucleotide)

<220>

<223> Synthetic construct

<400> 286

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atggagaaag	tcatgtttgc	agtatttttg	gttctttaca	tgataacact	ttcaggcaac	120
ctgctccttg	tggttacaat	taccaccagc	caggctctta	gctcccccat	gtacttcttc	180
ctgagccacc	tttctttgat	agacacagtt	tattcttctt	cttcagctcc	taagttgatt	240
gtcgattccc	ttcatgagaa	gaaaatcacc	tcctttaatg	gggtgatggc	tcaagcctat	300
gaagaacaca	tttttgggtg	tactgagatc	atcctgctga	cagtgatggc	ctgtgacaac	360
tatgtggcca	tctgcaaacc	tctgcactac	acaaccatca	tgagccacag	cctgtgcatt	420
ctcctagtgg	tagtggcctg	gataggagga	tttctccatg	caaataattca	gattctattt	480
acagtatggc	tgccttctcg	tggccccaat	gtcatagacc	acttcatgtg	tgacttgtgc	540
cctttgttaa	aacttgtttg	cctggacact	catacccttg	gtctctttgt	tgctgccaac	600
agtgggttca	tctgcttatt	aaacttcctt	ctctaggtgg	tatectatgt	gatcatcttg	660
agatgtttta	agaactatat	cttggagggg	aggggtaaag	ccctctccac	ctgtatttct	720
cacatcataa	tagttgtctt	attctttgtg	ccttgatat	ttgtgtatct	gcacccagtg	780
acaaactctg	cccattgata	aagctgctgc	tgtattttat	actatgggtg	tcccaatgtt	840
aaatcctttg	atctacacac	tcagaaatgc	tgaggtaaaa	agtgaataa	ggaagctttg	900
gagaaaaaaa	gttatttcag	ataatgacta	aataagacca	ttgagcactc	atcataga	958

<210> 287

<211> 937

<212> DNA

<213> Unknown (H38g136 nucleotide)

<220>

<223> Synthetic construct

<400> 287

atggagattg	gaaaccatac	cacagtgaca	gagtttatta	ttttgggggt	aactgaggat	60
cctacacttt	gtgacatctt	ctttgtgata	tttctaggaa	tctacattgt	caccttaata	120
ggcaatatca	gcataataaa	gaagctgttc	ccaacttcac	actcccatgt	acctgttctt	180
cagccacttg	gcttttgtgg	acatagggct	tgccacagta	gtcacaccta	taatgcttat	240
gggattccta	agacgtggaa	cagccctccc	tgctactagc	tgtgaagccc	agctctgttc	300
tgtagtcatg	tttgggacgt	ctgaatgctt	cctactggcg	accatggcct	atgatcgcta	360
tgtggccatc	tgctcaccct	tggtgaactc	caccacttg	tccccataa	tctgcatact	420
cttagtgggg	gtttgtctacc	tgggtggatg	tgtgaatgcc	tcaacattta	ctagttgttt	480
attgagtctg	tctttctgtg	gaccaaatac	gatagatcat	tttttctgtg	atttctctcc	540
tttgttgaaa	ctttcctgct	caaataatct	cattcctgaa	attatccctt	ccatctcttc	600
tggatctatc	attgtgggtc	cagtatttgc	catagccatc	tcctacatct	acatcctcat	660
caccatcctg	aagatgcgct	ccgccgaggg	gcgccacaag	gccttctcca	cctgtacctc	720
ccacctcgct	gcggttactc	tctactatgg	aacgattacc	ttcatttatg	tgatgcccaa	780
atccagttac	tcaactagcc	agaacagatt	gatatcgctg	tcctacacag	tggtaatccc	840
catactgaac	ccctttatct	atagtctgag	gaacagagat	gtaaaggagg	cactaagaaa	900
ggcaactgtc	agaatatatt	cttaggatca	atttcta			937

<210> 288

<211> 971

<212> DNA

<213> Unknown (H38g137 nucleotide)

<220>

<223> Synthetic construct

<400> 288

cacacagagc	cacggaatct	cacaggtgtc	tgagaattcc	tcctcctggg	actctcagag	60
gatccacac	tgcagccggg	cctcgctttg	ctgtccctgt	ccctgtccat	gtatctgggc	120
acgggtgga	ggaacctgct	gagcatcccg	gctgtcagct	ctgactcccc	gctccacacc	180
cccacgaact	tcttctcttc	catcctgtgc	tgggctgaca	tcgggttcac	ctcggccacg	240

gtttccaaga	cgattgtgga	catgcagtc	catagcagag	tcattctctca	tgcgggctgc	300
ctgacacaga	tgtctttctt	ggtccttttt	gcatgtatag	aaggcatgct	cctgactgtg	360
atggcctatg	actgctttgt	aggcatctgt	cgccctctgc	actaccacgt	catcgtgaat	420
cctcatctct	gtgtcttctt	tgttttggtg	tcctttttcc	ttagcctgtt	ggattcccag	480
ctgcacagtt	ggattgtgtt	acaattcacc	atcatcaaga	atgtggaaat	ctctaatttt	540
gtctgtgacc	cctctcaact	tctcaaactt	gcctgttctg	acagcgcat	caatagcatc	600
ttcatatatt	ttggtagtac	tatgtttggt	tttcttccca	tttcagggat	ccttttgtct	660
tactataaaa	tcgtcccttc	cattctaagg	atttcatcgt	cagatgggaa	gtataaagcc	720
ttctccacct	atggctctca	cctagcagtt	ttttgctgat	ttgatggaa	aggcattggc	780
gtgtacctga	cttcagctgt	ggcaccaccc	ctcaggaatg	gtgtggtggt	gtcagtgatg	840
taagctgtgg	tcaccccat	gctgaacctt	ttcatctaca	gcctgagaaa	cagggacata	900
caaagtgcc	tgcggaggct	gcgcagcaga	acagtcgaat	ctcatgatct	gttccatcct	960
ttttctggtg	t					971

<210> 289

<211> 954

<212> DNA

<213> Unknown (H38g138 nucleotide)

<220>

<223> Synthetic construct

<400> 289

atgattcagc	ctatggcgtc	acccagcaac	agctccactg	tcccagtctc	tgaattcctc	60
ctcacctgct	tccccaaactt	ccagagttgg	cagcactggc	tctccctgcc	cctcagcctt	120
ctcttctctc	tggccatggg	agctaacacc	accctcctga	tcaccatcca	gctggaggcc	180
tctctgcacc	agcccttgta	ctacctgctc	agcctcctct	ccctgctgga	catcgtgctc	240
tgcctcaccg	tcattcccaa	ggctctggcc	atcttctggt	atgatcttag	gtcgatcagc	300
ttccctgcct	gcttccctcca	gatgttcatc	atgaacagtt	tcctcccat	ggagtcctgc	360
acgtttatgg	tcattggccta	tgaccgttat	gtggccatct	gccaccact	gcggtaccca	420
tccatcatca	ctaatacaatt	tgtggccaaa	gctagtgtct	tcattgtggt	gcggaatgcg	480
cttcttactg	cacccattcc	tatcctcaact	tcctgctcc	attactgtgg	ggaaaatgtc	540
attgagaact	gcattctgtg	caacttgtct	gtgtccaggc	tctcctgtga	taatttcacc	600
cttaacagaa	tctaccaatt	tgtggtggt	tggaccttgc	tgggctcaga	tttattcctc	660
atcttctctc	cttacacctt	cattctaaga	gctgtgctta	gattcaaagc	agagggggcg	720
gcagtgaagg	ccctgagcac	atgtggctcc	cacttcatcc	tcattctttt	cttcagcacc	780
atactgctgg	ttgtggtggt	gacaaacgtg	gccagaaaga	aggtcccat	ggacatcctg	840
atcctgctga	acgtccttca	tcaccttatt	cctcctgcgt	tgaaccctat	tgtgtatggg	900
gttcggacca	aagagataaa	acaggggaatt	cagaagttac	tgcagagagg	gagg	954

<210> 290

<211> 713

<212> DNA

<213> Unknown (H38g139 nucleotide)

<220>

<223> Synthetic construct

<221> misc_feature

<222> (1)...(713)

<223> n = A,T,C or G

<400> 290

cccaagggtcc	cggacttttt	tgtgtttggc	ctaagggcc	ttagttttcc	ggccggtttt	60
ctccaaaagt	acattaagaa	ttgtttccaa	gccaggagtt	ttggccattc	aaggtcaggg	120
ccataggatc	gttaaggaac	ccttctgcc	cccccttgaa	atatccctcc	attcatcacg	180
gatccctttg	gagtcaaggc	tgccaggttt	attttgcccc	gnaatgggtg	taatgactct	240
gcccatcccc	catcctttca	gcacaactcc	gttattgtgg	aagaaatgtc	attgagaact	300
gcatctgtgc	caatatgtct	gtttccagac	tctcctgcga	tgatgtcacc	atcaatcacc	360
tttaccatt	tgtctggaggc	tggactctgc	taggatctga	cctcaccctt	atcttctctc	420
cctacacctt	cattctgcga	gctgtgctga	gactcaaggc	agaggggtgcc	gtggcaaagg	480

ccctaagcac	atgtggctcc	cacttcacgc	tcatectctt	cttcagcacc	atccttctgg	540
tttttgcct	cacacatgtg	gctaagaaga	aagtctcccc	tgatgtgcca	gtcttgetca	600
atgttctcca	ccatgtcatt	cctgcagccc	ttaaccccat	catttacggg	gtgagaaccc	660
aagaaattaa	gcaggggaatg	cagagggtgt	tgaagaaagg	gtgctaacaa	gga	713

<210> 291

<211> 924

<212> DNA

<213> Unknown (H38g140 nucleotide)

<220>

<223> Synthetic construct

<400> 291

atgaattccc	tgaaggacgg	gaatcacacc	gctctgacgg	ggttcatcct	attgggctta	60
acagatgatc	caatccttcg	agtcacctc	ttcatgatca	tcctatctgg	taatctcagc	120
ataattatc	ttatcagaat	ttcttctcag	ctccatcacc	ctatgtattt	ctttctgagc	180
cacttggctt	ttgctgacat	ggcctattca	tcttctgtca	cacccaacat	gcttgtaaac	240
ttcctgggtg	agagaaatac	agtctcctac	cttggatgtg	ccatccagct	tggttcagcg	300
gctttctttg	caacagtcga	atgcgtcctt	ctggctgcca	tgccctatga	ccgctttgtg	360
gcaatttgca	gtccactgct	ttattcaacc	aaaatgtcca	cacaagtcag	tgtccagcta	420
ctcttagtag	tttaccatagc	tggttttctc	attgctgtct	cctatactac	ttccttctat	480
tttttactct	tctgtggacc	aaatcaagtc	aatcattttt	tctgtgattt	cgctccctta	540
cttgaactct	cctgttctga	tatcagtgtc	tccacagtgt	ttctctcatt	ttcttctgga	600
tccatcattg	tggtcactgt	gtgtgtcata	gccgtctgct	acatctatat	cctcatcacc	660
atcctgaaga	tgcgctccac	tgaggggcac	cacaaggcct	tctccacctg	cacttccac	720
ctcactgtgg	ttaccctgtt	ctatgggacc	attaccttca	tttatgtgat	gcccaatttt	780
agctactcaa	ctgaccagaa	caaggtgggtg	tctgtgttgt	acacagtggg	gattcccatg	840
ttgaaccccc	tgatctacag	cctcaggaac	aaggagatta	agggggctct	gaagagagag	900
cttggttagaa	aaatactttc	tcat				924

<210> 292

<211> 1006

<212> DNA

<213> Unknown (H38g141 nucleotide)

<220>

<223> Synthetic construct

<400> 292

gatacagacc	cacagagtct	aacagatgtc	tctatatctc	tcctcctcga	actctcagag	60
gatccagaac	tgcaaccggg	cgctcgctgg	ctgttctctg	ccatgtgcct	cgctcatggg	120
ctggagaacc	tgctcatcat	cctggacgtc	agccctgact	cccacctccc	cacccccatg	180
tacttcttcc	tctccaaact	gtccttgcct	gacatcggtt	tcacctccac	cacgggtcccc	240
aagatgattg	tggaacatca	gtctcacagc	agagtcattc	atgcaggctg	cctgactgtg	300
atgtctctct	ttgccatttt	tggaggcatg	gaagagagac	atgctcctga	gtgtgatggc	360
ctatgaccgg	tttgtagcca	tctgtcacc	tctatatcgc	tcagccatct	tgaacccgtg	420
tttctgtggc	ttcctagatt	tgttgtcttt	tttttttttc	cctcagtctt	ttagactccc	480
agctgcacaa	cttgattgcc	ttacaaatga	cctgcttcaa	ggatgtggaa	attcctaatt	540
tcttctggga	accttctcaa	ctcccccatc	ttgcatgttg	tgacaccttc	accaggaaca	600
tcagcatgta	tttccctgct	gccgtatttg	gttttctttc	catctcgggg	accttttctt	660
cttactgtaa	aatgggtttc	tccattctga	gggtttcacc	atcaggtggg	aagtataaac	720
cttctccacc	tgaggttccc	acctgtcagt	tgtttgtgta	ttttatggaa	caggcgttgg	780
agagtacctc	ggttcagatg	tgtcatcttc	cccgagaaag	ggtgcagtgg	cctcagtgat	840
gtacacgggtg	gtcaccacca	tgtgaaccc	cttcactctac	agcctgagaa	acggggatat	900
taaaagtgtc	ctgcggcggc	cgcaaggcag	cacagtctca	tctcaatacc	ttcttatctg	960
ttccattcct	tttgtagggt	gggttaacaa	agacagcaag	gtcaaaa		1006

<210> 293

<211> 933

<212> DNA

<213> Unknown (H38g142 nucleotide)

<220>

<223> Synthetic construct

<400> 293

atggggactg	gaaatgacac	cactgtggta	gagtttactc	ttttgggggt	atctgaggat	60
actacagttt	gtgctatttt	atctctgtg	tttctaggaa	tttatgttgt	caccttaatg	120
ggtaatatca	gcataattgt	attgatcaga	agaagtcac	atcttcatac	acccatgtac	180
atcttcctct	gccatttggc	ctttgtagac	attgggtact	cctcatcagt	cacacctgtc	240
atgctcatga	gcttcctaag	gaaagaaacc	tctctccctg	ttgctgggtg	tgtggccag	300
ctctgttctg	tagtgacgtt	tggtagggcc	gagtgttcc	tgtggctgc	catggcctat	360
gatcgctatg	tggccatctg	ctcaccctg	ctctactcta	cctgcatgtc	ccctggagtc	420
tgcacatctt	tagtgggcat	gtcctacctg	ggtaggtgtg	tgaatgcttg	gacattcatt	480
ggctgcttat	taagactgtc	cttctgtggg	ccaaataaag	tcaatcactt	tttctgtgac	540
tattcaccac	ttttgaagct	tgttgttcc	catgatttta	cttttgaat	aattccagct	600
atctctctg	gatctatcat	tgtggccact	gtgtgtgtca	tagccatac	ctacatctat	660
atcctcatca	ccatcctgaa	gatgcactcc	accaagggcc	gccacaaggc	cttctccacc	720
tgcacctccc	acctcactgc	agtcactctg	ttctatggga	ccattacctt	catttatgtg	780
atgcccaggt	ccagctactc	aactgaccag	aacaagggtg	tgtctgtgtt	ctacaccgtg	840
gtgattccca	tgttgaaccc	cctgatctac	agcctcagga	acaaggagat	taagggggct	900
ctgaagagag	agcttagaat	aaaaatattt	tct			933

<210> 294

<211> 942

<212> DNA

<213> Unknown (H38g143 nucleotide)

<220>

<223> Synthetic construct

<400> 294

atgctcctta	gcaattcaag	ctggaggcta	tcccagcctt	cttttctcct	ggtagggatt	60
ccagggttag	aggaaagcca	gcactggatt	gcactgcccc	tgggcatcct	ttacctcctt	120
gcttttagtg	gcaatgttac	cattctcttc	atcatctgga	tggaccatc	cttgacacaa	180
tctatgtacc	tcttcctgtc	catgctagct	gccatcgacc	tggttctggc	ctcctccact	240
gcacccaaag	cccttgacgt	gtccttggtt	catgcccacg	agattgggta	catcgtctgc	300
ctgatccaga	tgttcttcat	ccatgcattc	tcctccatgg	agtcaggggg	acttgtggcc	360
atggctctgg	atcgctatgt	agccatttgt	cacccttgc	accattccac	aatcctgcat	420
ccaggggtca	tagggcgcat	cggaatggtg	gtgctgggtg	ggggattact	actccttacc	480
cccttcccca	ttttgttggg	aacacttacc	ttctgccaag	ccaccatcat	aggccatgcc	540
tattgtgaac	atatggctgt	tgtgaaactt	gcctgctcag	aaaccacagt	caatcgagct	600
tatgggctga	ctatggcctt	gcttgtgatt	gggctggatg	ttctggccat	tgggtgttcc	660
tatgccaca	tcctccaggc	agtgtgaag	gtaccaggga	gtgaggcccc	acttaaggcg	720
tttagcacat	gtggctctca	tatttgtgtc	atcctgggtc	tctatgtccc	tgggaatttcc	780
tccttctca	ctcaccgctt	tggatcatcat	gtaccccatc	atgtccatgt	tcttctggcc	840
acacggatc	tcctcatgcc	acctgcgctc	aatcctcttg	tctatggagt	gaagactcag	900
cagatccgcc	agcgagtgtc	cagagtgttt	acacaaaagg	at		942

<210> 295

<211> 945

<212> DNA

<213> Unknown (H38g144 nucleotide)

<220>

<223> Synthetic construct

<400> 295

atgacaaaag	gcaatcgtag	cacagtgacc	gaatttgtcc	tcattgggatt	cacagaccgt	60
cctgagctgc	agctccccct	ctttgtgggt	ttccttgtca	tttatctcat	cacctgggtg	120
ggaaaccttg	gcatgatcct	gctgatcaga	gcagactcgc	ggctccacac	ccccatgtac	180

tacttctca	gtcacctggc	attcattgat	ctgtgttact	catcttctat	tgggcccaag	240
atgctgcaaa	atgtattggg	gaagaaaaaa	accatctcct	tttcaggctg	ttttgctcag	300
ctgtacttct	ccggtgcttt	tgccactaca	gaatgattcc	tcttgccac	aatgccctac	360
gacgctacg	tggccatctg	caacccctg	atttacacag	ctattatgac	gcagcgggtc	420
tgcagggagt	tagtgatagg	ggtctatacc	tatggcttcc	gaaactctgt	gatacagaca	480
gctctgacgt	ttcagctgtc	tttctgcaac	tccgacgtca	tccaccactt	ctactgtgct	540
gacccccctc	tccctggcct	ctcctgctct	gacaccaca	acaaagaaaa	gcagctcatg	600
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cgtgcctccc	acctcactgt	cgtcaccatc	ttttatggca	cactattttt	catgtacctg	780
cagcaaccaa	ttcaggggaa	ttcatggaag	ccaaacaaag	tagtctctgt	gttttatagt	840
cttgtaattc	ccatgcttaa	ccctcttacc	tatcgcttga	gaaacacaga	agtaaaggat	900
gcctgaaaa	aaatgctaga	gggcaaagag	ttatagttag	tgagt		945

<210> 296

<211> 605

<212> DNA

<213> Unknown (H38g145 nucleotide)

<220>

<223> Synthetic construct

<400> 296

atgacaacac	accgaaatga	cacctctctc	actgaagctt	cagacttcct	cttgaattgt	60
tttgtcagat	ccccagctg	gcagcactgg	ctgtccctgc	ccctcagcct	ccttttctct	120
ttggccgtag	gggccaacac	cacctcctg	atgaccatct	ggctggaggc	ctctctgcac	180
cagccccctgt	actacctgct	cagcctctct	tccaaactgg	acatcgctgt	ctgcctcact	240
gtcatcccca	aggctctgac	catcttctgg	tttgacctca	ggcccatcag	cttccctgcc	300
tgcttctctc	agatgtacat	catgaattgt	ttcctagcca	tggagtcttg	cacattcatg	360
gtcatggcct	atgatcggtt	tgtagccatc	tgccaccac	tgagatatcc	atcaatcacc	420
actgatcact	ttgtagtcaa	ggctgccatg	tttattttga	ccagaaatgt	gcttatgact	480
ctggccatcc	ccatcctttc	agcacaactc	ttattgggaa	caatgttttt	aaaaccattc	540
ttggcaaatg	ttttgttcac	aatttctgct	gagatgcacc	ttaataacct	tacacatttc	600
tgaag						605

<210> 297

<211> 609

<212> DNA

<213> Unknown (H38g146 nucleotide)

<220>

<223> Synthetic construct

<400> 297

atgaatgaga	caaatcattc	ttgggtgaca	gaatttgtgt	tgctgggact	gtctagtcca	60
agggagctcc	aacctttctt	gtttcttata	ttttcactac	tttatctagc	aattctgttg	120
ggcaactttc	tcatcatcct	cactgtgacc	tcagattccc	gccttcacac	ccccatgtac	180
tttctgcttg	caaacctgtc	atttatagac	gtatgtgttg	cctcttctgc	taccctaaa	240
atgattgcag	actttctggt	tgagcacaag	actatttctt	ttgatgccca	cctggccag	300
attttctttg	ttcatctctt	cactggcagt	gaaatgggtc	tcctagtttc	catggcctat	360
gaccgttatg	ttgctatatg	caaacctccc	cactacatga	caatcatgag	ctgctgtgta	420
tgtgttgtgc	tcgtcctcat	ttcctgggtt	gtgggcttca	tccataccac	cagccagttg	480
gcattcacgt	taatctgcca	ttttgtgggc	ctaataaggt	agatagtttt	tttctgtgac	540
cttctcttag	cgctgaagtt	agcctgcata	gacacttatg	ttgtcagcct	actaatagtt	600
gcagatagt						609

<210> 298

<211> 912

<212> DNA

<213> Unknown (H38g147 nucleotide)

<220>

<223> Synthetic construct

<400> 298

atggcactta	gcaattccag	ctggaggcta	ccccagcctt	cttttttctt	ggtaggaatt	60
ccgggttttag	aggaaagcca	gcactggatc	gcactgcccc	tgggcatcct	ttacctcctt	120
gctctagtgg	gcaatgttac	cattctcttc	atcatctgga	tggacccatc	cttgcaccaa	180
tctatgtacc	tcttctgttc	catgctagct	gccatcgacc	tggttgtggc	ctcctccact	240
gcaccccaag	cccttcgagt	gctcctgggt	cgtgccaag	agattgggta	cactgtctgc	300
ctgatccaga	tgttcttcac	ccatgcattc	tctcccatgg	agtcaggggt	acttgtggcc	360
atggctctgg	atcgctatgt	agccatttgt	caccccttgc	accattccac	aatcctgcat	420
ccaggggtca	tagggcacat	cggaatgggt	gtgctgggtc	ggggattact	actcctcatc	480
cccttctctca	ttctgttgcg	aaaacttatc	ttctgccaag	ccaccatcat	aggccatgcc	540
tattgtgaac	atatggctgt	tgtgaaactt	gcctgctcag	aaaccacagt	caatcgagct	600
tatgggctga	ctgtggcctt	gcttgtgggt	gggctggatg	tcctggccat	tgggtgttcc	660
tatgccaca	ttctccagc	agtgtgaag	gtaccaggaa	atgaggcccc	acttaaggcc	720
tttagcacat	gtggctctca	tgtttgtgtc	atcctgggtc	tctatatccc	gggaatgttc	780
tccttctctca	ctcaccgctt	tggtcacatc	gtaccccatc	acgtccatgt	tcttctggcc	840
atactgtatc	gccttgtgce	acctgcactc	aatcctcttg	tctatagggt	gaagaccag	900
aagatccacc	ag					912

<210> 299

<211> 330

<212> DNA

<213> Unknown (H38g148 nucleotide)

<220>

<223> Synthetic construct

<400> 299

agtcacacag	aaccacagaa	tctcacaggt	gtctcagaat	tccttctctt	gggactctca	60
gaggatccag	aactgcagcc	tgtcctcgct	tggctgtcct	tgtccattta	cctgggcaca	120
gtgctgggga	acctgtctcat	catcctgggt	gtcagctctg	actcccaact	ccacaccccc	180
atatacttct	tcctcttcaa	cctgtccttg	gctgacattg	gtttcacctc	ggccatgggt	240
cccaagatga	ttgtggacat	gcaatcgcat	agcagagtca	tctcttatgc	gggctgcctg	300
acatagatgt	ctttctttgt	cctttttttt				330

<210> 300

<211> 980

<212> DNA

<213> Unknown (H38g149 nucleotide)

<220>

<223> Synthetic construct

<400> 300

tttttttcca	ataattctgt	tctcttccca	catactttct	tcctggctgg	catcccagga	60
ttgactgcca	cccacatttg	gattttactt	cccttttgct	ttatgttttt	cctgtcattg	120
actgggaatg	gtgtcctgct	ttttctcatc	cggacagaat	gcagccttcg	ccagcccatg	180
ttctcttttc	ttgccatgct	ctcctttgtc	gacttggtcc	tctctctctc	cacactgcct	240
aagatgctgg	ccattttctg	gtttgggtgct	acagccatca	gctcgcattc	ctgtctttcc	300
cagatgttct	tcatccatgc	attctctgcc	atggagtcag	gggtgctagt	ggccatggcc	360
ctggaccgct	ctgtggccat	ctgcaaccca	ctgcgttatg	caaccatcct	tccacctgtt	420
gttgttgcca	agattggagg	cctgggtgggt	ttgtgagggg	tgggattgac	catctccttt	480
ccaagcttgg	cccataggct	gcactaccat	ggctcacaca	tgattgccta	tacctctgt	540
gagcatatgg	cagtggtgaa	gcttgccctg	gaggccacca	ctgtggacaa	cctctatgcc	600
tttgtgggtg	caatctttct	tgggtggggg	gatgtgggtc	tattgcctat	tcttatgggc	660
tgattgtgag	gactgtaatg	cattttcctt	cacctgagga	acgtgcgaaa	gcaggcagca	720
catgtacagc	ccatgtctgt	gtcatcctct	tcttctatgg	actgggcttt	ctttctgtgg	780
tcatgcagcg	ctttggagca	cccacagctt	ctactgccaa	ggtcacctt	gccaatctct	840
acttgcctct	tccccagca	ctggatccca	ttgtctatgg	catggagacc	aagcagatct	900

aggagcggct attgatgatt ctaagcccca agcagattga gcttacctga gtatagttat 960
caccagctgg acttcagggt 980

<210> 301
<211> 721
<212> DNA
<213> Unknown (H38g150 nucleotide)

<220>
<223> Synthetic construct

<400> 301
cttagacaac ttcacaacct ttttcttctt gttggatttt ttctttcttt tactcctttt 60
aagttatatg cataatctaa attctgtgac taaattttcc agtaaaacag atgaatcaaa 120
gctcaaaagc taatgtaaag tcaaattctt tttctttacc tatgctggat gctgtgagaa 180
actactgctt gctgtagaaa agagagatct tcctttttgt tcattcattt cctccttcac 240
tagtcaactg ctgtttctga ccatgccaaag gtggaacctg gagtaggaag gagagagaga 300
gggtaaggga agtctcattg actgacgcta aaataagatg gcttcacatt ttctggctct 360
ggccaatgtt tactatttct tactcatatt aaacctctct gaatgcattt aacctatggga 420
gcaagtcttc tccccgaggt gcgtccccc gatttctttc agttcccagt ggtcccatat 480
aatctctcac agctggacgt tcaactcagta tgtaagacta ccatcttggg tacaatccct 540
ttcaaagcaa ctaaccact ttagtttcca tggccagtcc ttcaaactg catatatctg 600
actagctata agtggagctg taactcccat ttgtctgcaa agaccacggg gccagagttc 660
ggttgacgtc tgacatatcc ctgatgacag gatacacaca ttaaaacctc tgagtggccc 720
c 721

<210> 302
<211> 939
<212> DNA
<213> Unknown (H38g151 nucleotide)

<220>
<223> Synthetic construct

<400> 302
atggcatctc ccaacaatga ctccactgcc ccagtctctg aattcctcct catctgcttc 60
cccaacttcc agagctggca gcactggttg tctctgcccc tcagccttct cttcctcctg 120
gccatgggag ctaacaccac cctcctgac accatccagc tggaggcctc tctgcaccag 180
ccccgtact acctgctcag cctcctctcc ctgctggaca tcgtgctctg cctcacctgc 240
atccccaagg tcttgcccat cttctggttt gacctcaggt cgatcagctt cccagcctgc 300
ttcctccaga tgttcacat gaacagtttt ttgacctagg agtccctgcac gttcatggtc 360
atggcctatg accgttatgt ggccatctgc catccattga gataccctc tatcatcact 420
gaccagtttg tggctagggc cgtggtcttt gttatagccc ggaatgcctt tgtttctctt 480
cctgttccca tgccttctgc caggctcaga tactgtgcag gaaacataat caagaactgc 540
atctgcagta acctgtctgt gtccaaactc tcttgtgat acatcacttt caatcagctc 600
taccagtttg tggcaggctg gactctgttg ggctctgat ttatccttat tgttatctcc 660
tattctttta tattgaaagt tgtgcttagg atcaaggccg aggggtgctgt ggccaaggcc 720
ttgagcacgt gtggttccca cttcatcctc atcctcttct tcagcacagt cctgctgggt 780
ctggtcatca ctaacctggc caggaagaga attcctccag atgtcccat cctgctcaac 840
atcctgcacc acctcattcc cccagctctg aacccattg tttatgggtg gagaaccaag 900
gagatcaagc agggaatcca aaacctgctg aagagggtg 939

<210> 303
<211> 405
<212> DNA
<213> Unknown (H38g152 nucleotide)

<220>
<223> Synthetic construct

<221> misc_feature

<222> (1)...(405)

<223> n = A,T,C or G

<400> 303

aaagatttgt	gaaggagaag	taatattaac	tttagaatag	aaagtattat	atTTTTTTat	60
ataggggtgg	gagagangat	gggtttatga	aattaattgt	taatgttttg	tgaaagtttt	120
taatgataaa	aaactgtgtt	aaggattaag	ggtgagggag	atatggccaa	agctctaggt	180
acttgtggtt	cccacttcat	cctcatcctc	ttcttcacca	cagtcctgct	ggttctggtc	240
atcactaacc	tggccaggaa	gagaattcct	ccagatgtcc	ccatcctgct	caacatcctg	300
caccacctta	ttccccagc	tctgaacccc	attgtttatg	gtgtgagAAC	caaggagatc	360
aagcagggaa	tccagaacct	gctgaggagg	ttgtaaaaaa	taaaa		405

<210> 304

<211> 960

<212> DNA

<213> Unknown (H38g153 nucleotide)

<220>

<223> Synthetic construct

<400> 304

atggctccga	ccaacctcac	atctgcccc	gtgttctctc	tcctcggcct	ggtggacgga	60
acagacagag	gcccaccgc	tgctgttctc	gctctgcctt	ggcatctatc	tgctcaacgc	120
cctgagcaac	ctgagcatgg	tggcgctggg	gagatctgac	ggggccctcc	gctcccccat	180
gtattacttc	ttgggtcacc	tgagcctcgt	ggacgtctgc	tttaccaccg	tcacgggtccc	240
caggctgctg	gccggcctgc	tccaccggg	ccaggccata	tccttccagg	cgtgctttgc	300
cgagatgtac	ttcttcgtgg	ctctgggcat	caccgagagc	tacctccggg	cggccatgtc	360
ctacgaccgc	gcgacggcgg	cgtgccggcc	cctgcgctac	ggcgcgctgg	tgacgccatg	420
ggcgctgcgc	ctcgctgggt	cgtgcgtcgt	gggccgtgac	gcacctgcac	tcgctgctgc	480
acaagctgct	cctctccgcg	ctctcttacc	cctacccccc	ccccgtgcgc	cccttctttt	540
gcgacatgac	ggtgatgctg	agcttggcga	cctcggacac	gtccgcccgcg	gagacggcca	600
tcttctccga	gggcctggcc	gtggtgttgg	ccccgctgct	cctcgtgttc	cttttcttac	660
gcgcgcatcc	tggtcgcggg	gctcggcttg	ccgcggccgg	cgccgcgcct	tctccacctg	720
cggggccccc	ctagtggcgg	tggcgggtgg	ggtggcgctt	ttctttgggt	ctgtcctctc	780
cgtgtatttc	ccgcgctcgt	ctgcctactc	agcccgttac	gaccgcctgg	ccagcgtggg	840
ctacgctgtc	atcacgccga	ccttgaaccc	tttcatcaac	agccttcgca	acaaagaggt	900
caagggcgcc	ctgaaaaggg	ggctcagatg	gagggctgca	ccccaaagagg	cgtgagggga	960

<210> 305

<211> 975

<212> DNA

<213> Unknown (H38g154 nucleotide)

<220>

<223> Synthetic construct

<400> 305

atgttctctc	ccaataaac	ccagtttcc	ccctcctcct	tcctgttgct	ggggatccca	60
gggctagaaa	cacttcacat	ctggatcggc	tttccctttt	gtgctgtgta	cataattgca	120
ctcatagggc	gcttcactat	tctacttggt	atcaagactg	acagcagcct	ataccagccc	180
atgttctact	tcctggccat	gttgccacc	attgacttgg	gcctttcaac	agctaccatc	240
cctaagatgc	ttgggatctt	ctggtttagc	ctcagggaga	ttatctgtga	tgctgcctc	300
atccagatgt	ttttcatcca	caactttact	ggcatggagt	cagcagccct	cgtgggaatg	360
gcttatgacc	actttgtggc	catctgcaac	ccgctacgat	atagcatcat	cctcaccaaa	420
aaggctgttt	ctgtgattgg	tcttgggtgt	ttagtggagt	catttatgtc	tgttattcca	480
tttgtttttc	tcatttttgcg	gttgcccttc	tgtggggatc	atgtcattcc	ccacaccaac	540
tgtgagcaca	tgggtcttgc	tcactctgtc	tgttccagta	tcaagatcaa	tataatctat	600
ggcttgggtg	ctatttcaat	cctagtattc	gacatcatag	ccattgcctt	ttcttatgtg	660
caaatacttc	acgctgtttt	ccatcttctc	tcctgtaaag	cctgactcaa	gtccctcagc	720
acatgtgggt	cacatgtgtg	tgtaatcctt	gccttctata	caccagccct	cttttctttt	780
gtgactcatc	gctttggcca	aaatgtgccc	cgctatatcc	atatactcct	agccaatctc	840

tatgtttgtgg	tgccaccaat	gctcaatcct	gtcatatatg	gagtcagaac	caagcagatc	900
tatgtctgtg	tgaagaatat	attctttacaa	aaataagaaa	ttgaaaagaa	atcgcatcta	960
atacatataa	gaagg					975

<210> 306

<211> 957

<212> DNA

<213> Unknown (H38g155 nucleotide)

<220>

<223> Synthetic construct

<400> 306

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ggactggaga	aaagtgcgac	ctggatatcc	attcctttct	tatctgtgta	ccttctttct	120
tggatgggta	attttaccgt	cctctttttt	atcaagacag	agcaaagcct	ccatgaacct	180
atgtattatt	tgctttccat	gctctccatc	tctgacctag	ggctgtctct	gtcttccctta	240
cccatcactt	tgggactatt	cctatttgat	gtccatgaaa	ttcatgcagc	tccatgcttt	300
gcctaggaat	tttttatcca	tctgtttaca	gtcagtgaag	cctctgtact	gtctgtaatg	360
gcatttgact	ggtatgtggc	aatccacagt	cctttgagat	acagcactat	cttaactagt	420
cccagagcca	tcaaaacagg	ggttcttctg	acttccaaga	atgttctttt	gatacctcca	480
ctgccctttc	tcttgcaaaag	gctgagatat	tgtcatcaaa	acctgctctc	ccactcctat	540
tgtctccacc	aggatgtcat	gaagctgatg	tgttctgaca	acacagtcaa	tgttgtctac	600
ggactctgtg	caggactttc	tactatgctg	gacttgggtg	tgattacctt	ctcctaaatt	660
atgattttaa	gggctgtact	gggaattgct	acccccagac	agcagttcaa	ggccctcaac	720
acgtgcatct	ctcacatctg	tgctgtgctt	atcttctatg	tgccccacgt	gagtgtgccc	780
atgtctccacc	agtttgccag	ggatgtgtct	cctatgatcc	acgtcctcat	ggctgatatt	840
tttctgctgg	tgccaccctt	gttgaatccc	atcgtgtact	gtgtgaagac	ccaccaaate	900
cgagaaaagg	ttgtggggaa	actttgtcca	aaagtaagtt	gatcaaagga	atgagaa	957

<210> 307

<211> 939

<212> DNA

<213> Unknown (H38g156 nucleotide)

<220>

<223> Synthetic construct

<400> 307

atgtccatta	tcaacacatc	atatgttgaa	atcaccacct	tcttcttgggt	tgggatgcca	60
gggctagaat	atgcacacat	ctggatctct	atccccatct	gcagcatgta	tcttattgct	120
attctaggaa	atggcaccat	tctttttatc	atcaagacag	agccctcctt	gcatgagccc	180
atgtactatt	ttctttccat	gttggtctatg	tcagacttgg	gtttgtcttt	atcatctctg	240
cccactgtgt	taagcatctt	cctgttcaat	gtcctgaaa	tttcatccaa	tgccgtcttt	300
gcccaggaat	tcttcattca	tggattctca	gtactggagt	cctcagtcct	cctgatcatg	360
tcatttgata	gattcctagc	catccacaac	cctctgagat	acacctcaat	cctgacaact	420
gtcagagttg	cccaaatagg	gatagtattc	tcctttaaga	gcatgctcct	ggttcttccc	480
ttccctttca	ctttaagaaa	cttgagatat	tgcaagaaaa	accaattatc	ccattcctac	540
tgtctccacc	aggatgtcat	gaagttggcc	tgttctgaca	acagaattga	tgttatctat	600
ggcttttttg	gagcactctg	ccttatggta	gactttatct	tcattgctgt	gtcttacacc	660
ctgatecctca	agactgtacc	gggaattgca	tccaaaaagg	agcagcttaa	ggctctcaat	720
acttgtgttt	cacacatctg	tgcagtgate	atcttctacc	tgccccatcat	caacctggcc	780
gttgtccacc	gctttgcccg	gcattgtctct	cccctcatta	atgttctcat	ggcaaatggt	840
ctcctaacttg	tacctccact	gacgaaccca	attgtttatt	gtgtaaaaac	taaacagatt	900
agagtgtgag	ttgtagcaaa	attgtgtcaa	cggaagatt			939

<210> 308

<211> 925

<212> DNA

<213> Unknown (H38g157 nucleotide)

<220>

<223> Synthetic construct

<400> 308

atggtgaata	gaaacaatgt	gacagagttt	attctactgg	ggcttataga	gaatccaaaa	60
atgcagaaaa	tcatatttgt	tgtgttttgt	catctacatc	accaccatga	taggaaatgt	120
gctcattgtg	gtcaccgtca	ctgccagccc	atcattgagg	tcccccatgt	actttttacct	180
ggcctatctg	tccttttattg	atgcctgcta	ttcctccgtc	aatgccccta	agctgatcac	240
agattcactc	tatgaaaaca	agactatctt	actcaatgga	tgtatgactc	aagtcttttg	300
agaacatttt	ttcggagggtg	ttgagggtcat	cttacttact	gtaatggcct	atgaccgcta	360
cgtgggtcatc	tgcaagccct	tgcactatac	caccatcatg	aagcagcatg	tttgtagcct	420
gctagtggga	gtgtcatggg	taggaggctt	tcttcatgca	accgtacaga	tcctcttcat	480
cttccaatta	ccttttctgtg	gtcctaattgt	catagatcac	tttatgtggg	atctcaaccc	540
tttgtctaat	cttgtctgca	ctaataccca	cactctagga	ctcttcgttg	ctgccaacag	600
tgggttcata	tgccgtgtaa	acttttctctt	gtccttggtc	tcctatatgg	tcatactgta	660
ctccttaagg	acccacagct	tagaggcaag	gtgcaaagcc	ctctccacct	gtgtctccca	720
catcacagtt	gtcatcttat	tctttatacc	ctgcataatt	gtgtacatga	gacctccagc	780
tactttaccc	attgataaag	cagttgctgt	attctacact	atgatatgctc	ctatgtttaa	840
ccccttaatc	tacaccttga	ggaatgctca	gatgaaaaat	gccattagga	aattgtgtag	900
taggaaagct	atttcaagt	tcaaa				925

<210> 309

<211> 963

<212> DNA

<213> Unknown (H38g158 nucleotide)

<220>

<223> Synthetic construct

<400> 309

atggcatacc	atggcaacag	gggcactttt	caccagcca	cattttttct	cattggaatc	60
ccaggtctgg	aagacgtcca	tatgtgaatc	tccttgcact	tctgtctgt	ttaccttttg	120
gctttgctgg	gaaatgctac	cattctgcta	gtcatcaagg	cagaacagac	cctccgggag	180
cccatgttct	acttttctggc	catcctttcc	acaattgatt	tggcccttcc	tacaacctct	240
gtgcctcgta	cgctgggtat	cttctgggtt	gatgtcatg	agattaactt	tggagcatgt	300
gtggcccaga	tgtttctgat	ccatgccttc	actggcatgg	aggctgaggt	ctgggtggcca	360
tggcctttga	ccgttacgtg	gccatctgca	atccacttca	ctacacaaac	atcttgacat	420
cccgggtgct	ggtgggcatc	actatgtgca	ttgtaattcg	tccagttctg	tttactctcc	480
cgataatcta	tctcatctac	cgtttaccat	tttggtcagg	gtcatataaa	tagcccatte	540
ctactatgag	cacatgggca	ttgcaaaatt	gtcctgtgga	aacatccgtg	tcaatgctat	600
ctatgggctc	tttgtgggtc	cctctatctc	ctgaacctgg	tccttattgt	tatctcatat	660
gtgtacattc	tctgtgctgt	cttctgcctc	gcacacatg	atgctcggct	aaaagcccta	720
agcaacatgt	ggctctcatg	ttgggggtcat	ctgtgttttc	tatatcccg	cggacttctc	780
tttcctactc	attgatttgg	acacaacatt	ccacattaca	tgcacattct	tgttgctact	840
ctctatttgg	ttatccacc	ctctctcaac	cccatcattt	gtgggggtgag	gaccaaattg	900
aaacgagagc	gagtgtctta	tgtacttact	aaaaaataag	attctgacca	tgttctttta	960
cta						963

<210> 310

<211> 483

<212> DNA

<213> Unknown (H38g159 nucleotide)

<220>

<223> Synthetic construct

<400> 310

ggcacagttt	agatcctctc	cccagttctga	cttcctttct	atgatcccaa	tgtcatagct	60
cattcatgtg	tgacttaaac	actttgttga	aactcctctg	catgggtact	actaatacac	120
ttggtttctt	tgttgctgcc	aatgggtgggt	tcaactacct	attaaacatc	attttcttga	180
tggtttctta	agtggccatc	ctatgtactt	tgaaaactca	cagcttggag	gaaagatgct	240

aaagccctct	ctacctgcat	ctctcacacc	accgtgggtca	tcttatcttt	gggttctgta	300
tatctgtgta	tctgtgcca	gtgacccttc	cccaatcaat	aaagcagtgg	ctgtgtttta	360
taccatgata	aatcctatgt	taaaaccttt	agtctaacc	tcagaaatgc	agaggtgaaa	420
agtgccttga	gaaagctctg	ggtcaaaaaga	tgaactgaag	agagaaataa	tccaaacata	480
aga						483

<210> 311

<211> 933

<212> DNA

<213> Unknown (H38g160 nucleotide)

<220>

<223> Synthetic construct

<400> 311

atgttttata	acaacaagag	catattttcac	ccagtcacat	ttttectcat	tggaatccca	60
ggtctggaag	acttccacat	gtggatctcc	gggcctttct	gctctgttta	ccttgtggct	120
ttgctgggca	atgccaccat	tctgctagtc	atcaaggtag	aacagactct	ccgggagccc	180
atgttctact	tcctggccat	tctttccact	attgatttgg	ccctttctgc	aacctctgtg	240
cctcgcatgc	tgggtatctt	ctggtttgat	gctcacgaga	ttaactatgg	agcttgtgtg	300
gccagatgt	ttctgatcca	tgccttccact	ggcatggagg	ctgaggtctt	actggctatg	360
gcttttgacc	gttatgtggc	catctgtgct	ccactacatt	acgcaaccat	cttgacatcc	420
ctagtgttgg	tgggcattag	catgtgcatt	gtaattcgtc	ccgttttact	tacacttccc	480
atggctctatc	ttatctaccg	cctacccttt	tgtcaggctc	acataatagc	ccattcctac	540
tgtgagcaca	tgggcattgc	aaaattgtcc	tgtggaaca	ttcgtatcaa	tggtatctat	600
gggccttttg	tagtttcttt	ctttgttctg	aacctgggtc	tcattggcat	ctcgtatgtt	660
tacattctcc	gtgctgtctt	ccgcctccca	tcacatgatg	ctcagctaaa	agccctaagc	720
acgtgtggcg	ctcatgttgg	agtcactctgt	gttttctata	tcccttcagt	cttctctttc	780
cttactcatc	gatttggaca	ccaaatacca	ggttacattc	acattcttgt	tgccaatctc	840
tatttgatta	tcccaccctc	tctcaacccc	atcatttatg	gggtgaggac	caaacagatt	900
cgagagcgag	tgctctatgt	ttttactaaa	aaa			933

<210> 312

<211> 946

<212> DNA

<213> Unknown (H38g161 nucleotide)

<220>

<223> Synthetic construct

<400> 312

atggagaata	ggaataacgt	gacagagttt	gttttactag	ggcttacaga	gaatccaaag	60
atgcagaaaa	tcatatttgt	tgtgtttttt	tgtcatctat	atcatcactg	tggtgggaaa	120
tgcgctcatt	gtggtcacca	tcactgccag	cccactcactg	gggtccccc	tgtacctttt	180
cctggcctat	ctctccttta	tagatgcctg	ctattcttct	gtcaataccc	ctaagctgat	240
cacagattca	ctctatggaa	agaacaccat	cctatttcaat	ggatgcatga	ctcaagtctt	300
tggagaacat	ttcttcggag	gtgcagaggg	tatcctactt	actgtgatgg	cctatgaccg	360
ctatgtggcc	atctgcaagc	ccttgcaacta	tatgactatc	atgaaccagt	gtgtgtatgc	420
cctgctaagt	ggagtgggtg	ggatgggagg	ctttcttcat	gcaaccatac	agatcctctt	480
catcttccaa	ttacctttct	gtggtcctaa	tgtcatagat	cactttatgt	gtgatctgaa	540
ccctttgtc	aacctcgcct	gcactgacac	ccatatgctg	ggactcttca	ttgctgccaa	600
cagtggattc	atctgcttgt	taaactttgt	cctcctgctg	gtctcctatg	tggtcatctt	660
gcgctcccta	aggactcaca	gcttggaggc	aaggcaca	gccctctcca	cctgtgtctc	720
ccacatcaca	gttgtcatct	tattctttgt	gccctgcata	tttgtgtaca	tgagacctgc	780
agctacttta	cctattgata	aagcagttgc	tatattctac	actatgataa	ctcctatgtt	840
aaaccctta	atctatacct	tgaggaatgc	ccagatgaaa	aatgccatca	ggaaattgtg	900
tagtagaaaag	gacatttcag	gtaacaaata	aatgtaacta	gagctc		946

<210> 313

<211> 966

<212> DNA

<213> Unknown (H38g162 nucleotide)

<220>

<223> Synthetic construct

<400> 313

tcaaatactg	ggatgtccat	tctcaatacc	tctgaaatgg	aaatctctat	tttctacttg	60
gttgggatcc	caggtttggg	gcatgccaat	atttggatct	ctatccccc	atgtctcatg	120
tacactgttg	ctatcctagg	gaattgtacc	attctgtttt	tcataaaaac	agagccttct	180
ttgcatgagc	ccatgtacta	ttttctctcc	atgttggtcc	tctctgacct	gggactatcc	240
ctctcctctc	tcctaccat	gttaaggatt	ttcctgttca	atgctccagg	aatttcccct	300
gatgcctgta	ttgtcaaga	gtttttcatt	catggattct	cagctatgga	gtcatctgta	360
cttcttataa	tgctcttga	tcgctttatt	gccatctgca	accccctgag	atacacttcc	420
atcctcacca	gtgccagagt	cattcaaatt	gggcttgctt	tttctctcaa	aaatgttttg	480
ttgatcctcc	catttccctt	cactctaaaa	catctaaaat	attgtaagaa	gaacctcctg	540
tcccaatcct	actgcctcca	tcaagatgtc	atgaaactgg	cctgcactga	caacaagggtc	600
aacatcatct	atggcttatt	tgtggctctc	acaggcatcc	tagacttgac	atttattttc	660
atgtcctaca	tggtgatact	gaaagcagtg	ttgagcatag	catcatgaaa	gaaaaggctc	720
aaggctctca	atacatgtgt	ttcccacatc	tgtgctgtgc	tcattcttcta	tgtgcccatt	780
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atagctgatg	cttttctgct	gggtgcctcca	ttgatgaacc	ccattgtata	ctgtgtgaag	900
agccagcaga	taagaaatct	tgtcttagaa	aaactgtgcc	agaagcaaag	ctgaagcgga	960
tgctta						966

<210> 314

<211> 961

<212> DNA

<213> Unknown (H38g163 nucleotide)

<220>

<223> Synthetic construct

<400> 314

agtcacacag	agccacagaa	tctcacaggt	gtctcagaat	tcctcctcct	gggactctca	60
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atgctgggga	actgctcatc	atcctggcgg	tcacctgac	tcccacctcc	acatccccc	180
gtacttcttc	ctctccaacc	tggtccttgg	ccatgacatt	gcgtttcacc	ttaggccacg	240
gtccccaaga	tgattgtaga	catgcaatca	catagcagag	tcattctcca	tgcaggctgt	300
ctgacacaga	tacctttctt	tgctcttttt	gtatgtatag	atgacatgct	cctgactgtg	360
atggcctatg	actgatttgt	ggccatctgt	cacccccctgc	actaccaggt	catcatgaat	420
cctcacctct	gctgtcttct	tagtgttgat	gtcttttctt	tagcctgttg	gattcctagc	480
tgcacaactg	gattgttaca	attcacctgc	ttcaagaatg	tggaaatctc	taattttttc	540
tgtgactgat	ctcaacttct	caaccttgcc	tgttctgact	gtcatcagta	acatattcat	600
acatttagat	agtactatat	ttgggtttct	tcccatttca	gggatccttt	tgtcttacta	660
taaaattgtg	ccctccattc	taagaattcc	attgtcagat	gggaagtata	aagccttctc	720
cacctgtggc	tctcacctgg	caattgtttg	cttattttat	ggaacaggca	ttggcatgta	780
cctgacttca	gctgtgtcac	cagccccccag	gaatgggtgtg	gtggcatcag	tggtgtacgc	840
tatgtcaccc	ccatgctgaa	ccccttcatc	tgcagcctga	gaaacagggg	gcattcaaag	900
tgcctgtggg	aggctgtgca	ggaggaaagt	ctaattctcat	gatctgtttc	atcctttttc	960
t						961

<210> 315

<211> 960

<212> DNA

<213> Unknown (H38g164 nucleotide)

<220>

<223> Synthetic construct

<400> 315

atgcgtctca	tatgagatga	agaaatgtcc	agaagaaact	atactgaact	gacagaattt	60
------------	------------	------------	------------	------------	------------	----

gttctcttgg	gtctaacaag	cgtccagag	ctgcgagttg	ctttcttggc	actgttcctt	120
tttgtctaca	tagccactgt	ggtaggaaac	ttggggatga	ttattttaat	caaagttgat	180
tctcgacttc	acactcccat	gtaatttttt	ctctccagtt	tgtccattct	agatctgtgt	240
ttctccacaa	atttccactc	caaaatgcta	gaaaatttct	tatcagagaa	gaagaccatt	300
tcctatgcag	gttgtttgat	gcagtgcctat	gttgtcattg	ctgtggtcct	tgcagagcac	360
tgcattgttg	cagtcattgg	atatgaccgc	tatatggcca	tctgtaatcc	attgctctac	420
agtagcaaaa	tgtcccaagg	tgtttgtgtc	cacctgggtc	ttgtccctta	tgtctatggc	480
tttcttctca	gtgtgatgga	aaccttaagg	acctacaacc	tctccttctg	tggaaacaaat	540
gaaatcaacc	atttctactg	tgtgtatcct	cctcttatca	aactggcatg	ctctgacacg	600
tacagcaagg	agctgtccat	gtacatagta	gccgggtaca	gcaacgtcca	gtctcttctg	660
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ggaaggaaaa	aagctttttc	cacatgtggt	tccacctga	cagttgtcac	aatcttctat	780
ggaacctctt	tctgcatgca	tttgagacgt	cccacagacg	agtccgtgga	gcaggggaaa	840
atggtggctg	tgttttacac	cacagtgata	ctcatgctga	actccatgat	ctatggcctc	900
aggaacaagg	atgtgaaaga	ggcgttgaaa	aaagcaatag	gaaaacaaac	attgggaaaa	960

<210> 316

<211> 947

<212> DNA

<213> Unknown (H38g165 nucleotide)

<220>

<223> Synthetic construct

<400> 316

aggaggatgg	gcaatcacac	tgcagtgagc	ctattccttc	tgtggggatt	ttccagtttt	60
tcagacctgc	agagtctact	ttttgtgggtg	attctcttct	acatgtgacc	atcctagctg	120
caaacgtgtc	cataatgggg	gccatcaagc	tcagccacaa	ccttcacact	cctatgtact	180
ttttcctctg	tggcctgtcc	ttttcagaaa	cttgtaccac	tgtggtagta	atccctcgca	240
tgttgggtgga	ctttctatca	gagagcaaga	ccatttctct	tcctgagtgt	gccacacaga	300
tgtttttctt	tctgggcttt	gcatccaaca	actgtttcat	catggccgct	atgtcctacg	360
accgctacac	ggccatccac	aacctactgc	agtaccacac	ccttatgaca	agaaagatct	420
gcttgcagat	gatgatggct	tcttggatgg	ttgggttcc	gttttctctg	tgcactatcg	480
tcactgtatt	caacttgtct	ctttgcgact	tgaacactat	ccagcactat	ttctgtgata	540
tctcaccagt	ggtctccctt	gcttghtaatt	acactttcta	tcatgaaatg	gctatttttg	600
tgtctctctg	ctttgtgttg	gtgggcagct	gtattttaat	tatgatttcc	tatgtcttca	660
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gtcctctcca	cctcactgtt	gtgtccatac	actatggatt	tgtttgtctt	gtctatttga	780
ggcccaagaa	cagcaactcc	ttcgatgaag	acatgctgac	ggccatgata	tatacaatac	840
tgtgcctctt	gcttaacccc	atcgtgtaca	gtctgagaaa	caaagaaatg	cagatagccc	900
taagaaaaac	actaggcagt	gtatttgggg	ttttccctca	gaagaca		947

<210> 317

<211> 955

<212> DNA

<213> Unknown (H38g166 nucleotide)

<220>

<223> Synthetic construct

<400> 317

atgtcagcat	acaataacac	caatgcccgt	ccatcaacct	ttattcttat	tggcattcct	60
gggttggaag	ctgctcacat	ctggatctcc	atcccccttt	gtgtgggtcta	cctgttggcc	120
ctactgggaa	acggctctct	tctgtttatc	atcaagacag	agcccagcct	ccatgagcca	180
atgtacctct	tcctatgcat	gctggctgta	gttgatcttg	ttgtgtgttc	tacagctgtg	240
cccaaacttc	tcagtctctt	ctgggtccat	gatggagaga	ttcgctttga	aacctgcctc	300
actcgtgttc	ctgattcact	cttgctccac	catggaatct	ggcttcttcc	tggccatggc	360
ttttgaccga	tatgtggcca	tttgcaatcc	attaagacat	tcagctattc	tgacacgcgc	420
tgtaatggg	agagtgggcc	tagctattgt	tctcaggggc	atagcacttc	tcagtcctca	480
ctctttccta	ctacgctggc	ttccctactg	cagaacccat	atcatttctc	acacctactg	540
tgagttcatg	gccctcatca	ggattgcctg	tgtctgagaca	aaattccgca	gagcctacag	600

cctcattggt	gccttcctta	ctgggggtggt	agactttata	ttgatcattt	attctttatgt	660
cctcatactc	cacactgtct	tccagctccc	atccaaagat	gcccggctca	aatcttttggg	720
cacctgtggc	tcccatgtct	gtgtcatctt	agtatcctat	actccagcct	tcttctcggt	780
tctcaccac	agggttgggc	accatgtggc	tccccatttt	cacatatttg	tggccaacat	840
ctatcttctt	gtcccaccca	tgggtgaacc	cattatctat	ggggtaagaa	ccaaaaggat	900
ttgggacagg	ttccttaaag	ttttcagttt	ttcaaagcct	ctaagtaaat	cattt	955

<210> 318

<211> 921

<212> DNA

<213> Unknown (H38g167 nucleotide)

<220>

<223> Synthetic construct

<400> 318

atgctcaatt	tcaccgatgt	gacagagttc	attctttttg	ggctaacgag	ccgtcgagaa	60
tggcaagttc	tcttcttcat	catctttctt	gtggtctaca	tcatacccat	ggtgggcaat	120
atcggcata	tgggtgtaat	caaggtcagt	cctcagctta	acaaccccat	gtactttttc	180
ctcagtcact	tgtcatttgt	tgatgtgtgg	ttttcttcca	atgtcacccc	taaaatgttg	240
gaaaacctgt	tatcagataa	aaaaacaatt	acttatgctg	gttgtttagt	acagtgtttc	300
ttcttcattg	ctcttggtcca	tgtggaaatt	tttattcttg	ctgcgatggc	ctttgataga	360
tacatggcaa	ttgggaatcc	tctgctttat	ggcagtaaaa	tgtcaagggg	tgtctgtatt	420
cgactgatta	ctttccctta	catttatggg	tttctgacga	gtctggcagc	aacattatgg	480
acttacggct	tgtacttctg	tggaaaaatt	gagatcaacc	atttctactg	tgcagatcca	540
cctctcatca	aaatggcctg	tgccgggacc	tttgtaaaa	aatatacaat	gatcatactt	600
gccggcatta	acttcacata	ttccctgact	gtaattatca	tctcttactt	attcaccctc	660
attgccatcc	tgcgaatgcg	ctcagcagaa	ggaaggcaga	aggccttttc	cacatgtggg	720
tcccatctga	cagctgtcat	tatattctat	ggtactctga	tcttcatgta	tctcagacgt	780
cccacagagg	agtctgtgga	gcaggggaag	atggtggctg	tgttctatac	cacagtgatc	840
cccatgttga	atcccatgat	ctacagtctg	aggaacaagg	atgtgaaaaa	ggccatgatg	900
aaagtgatca	gcagatcatg	t				921

<210> 319

<211> 966

<212> DNA

<213> Unknown (H38g168 nucleotide)

<220>

<223> Synthetic construct

<400> 319

atgaccatga	caacggagaa	cccccaaccg	actgtgggtga	gccacttctt	cctggagggt	60
ttgaggatga	ccgctaaaca	ttctagcctc	ttcttctctc	tcttctctct	catctacagc	120
atcaactgtg	ctgggaatct	cctcatcctc	ctaactgtgg	gctctgactc	tcacctcagc	180
ttacccatgt	accacttcct	ggggcacctc	tccttctctg	atgcctgttt	gtctacagtg	240
acagtgccca	aggatcatgg	aggcctgctg	actctgggatg	ggaagggtgat	ctcctttgag	300
ggctgtgccc	tacagcttta	ttgcttccac	tttctggcca	gcaactgagt	cttctctgtac	360
acagtcatgg	cctatgaccg	ctatctgggt	atctgtcaac	ccctgcacta	cccagtggcc	420
atgaacagaa	ggatgtgtgc	agaaatgggt	ggaatcacct	gggccatagg	tgccacgcac	480
gctgcaatcc	acacctccct	caccttccgc	ctgctctact	gtgggccttg	ccacattgcc	540
tacttcttct	gcgacatacc	cctgttctta	aagctcgctc	gtacagacac	caccattaat	600
gagctagtca	tgcttgccag	cattggcatc	gtggctgcag	gctgcctcat	cctcatcggt	660
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cgggccttct	ccccctgcac	tgccagctc	actgggggtgc	tcctgtacta	cgtgccacct	780
gtctgtatct	acctgcagcc	tcgctccagt	gaggcaggag	ctggggcccc	tgtgtctctc	840
tacacaatcg	taactccaat	gctcaaccca	ttcatttaca	ctttgcggaa	caaggagggtg	900
aagcatgctc	tgcaaagggt	tttgtgcagc	agcttccgag	agtctacagc	aggcagccca	960
ccccc						966

<210> 320

<211> 967

<212> DNA

<213> Unknown (H38g169 nucleotide)

<220>

<223> Synthetic construct

<400> 320

aaaatgctca	atttcaccga	tgtgacagag	ttcattcttt	tgggggctaac	gagccgctcgg	60
gaatggcaag	ttctcttctt	catcggtttt	cttgtgggtct	acattatcac	cgtgggtgggc	120
aatatcggca	tgatgttggt	aatcaaggtc	agtcctcagc	ttaacagccc	catgtacttt	180
ttcctcagtc	acttgtcatt	tgttgatgtg	tggttttctt	ccaatgtcac	ccctaaaatg	240
ttggaaaatc	tgttatcaga	taaaaaaaaa	aacaatttct	tatgctggct	gttttagcaca	300
gtgtttcttc	ttcattgctc	ttgtccatgt	ggaaattttt	attcttgctg	cgattgcctt	360
tgatagatac	acagtgattg	gaaatccttt	gctttatggc	agcaaaatgt	caagggatgt	420
ctgtattcga	ctgattactt	tcccttacat	ttatgggttt	ctgacgagtc	tgacagcaac	480
attatggact	tatggcttgt	acttctgtgg	aaaaatttag	atcaaccatt	tctactgtgc	540
agatccacct	ctcatcaaaa	tggcctgtgc	cgggaccttt	gtaaaagaat	atacaatgct	600
catacttgcc	ggcatcaact	tcacatattc	cctgactgta	attatcatct	cttacttatt	660
catcctcatt	gccattctgc	gaatgcgctc	agcagaagga	aggcagaagg	ccttttcac	720
atgtgggtcc	catctgacag	ctgtcatcat	attctatggg	actctgatct	tcatgtatct	780
cagacgtccc	acagaggagt	ctgtggagca	ggggaagatg	gtggctgtgt	tctataccac	840
agtgatcccc	atgttgaatc	ccatgatcta	cagtctgagg	aacaaggatg	tgaaaaaggc	900
catgatgaaa	gtgatcagca	gatcatgtta	aacaaaataa	aatcaagttt	gaattaattt	960
tgtcttc						967

<210> 321

<211> 933

<212> DNA

<213> Unknown (H38g170 nucleotide)

<220>

<223> Synthetic construct

<400> 321

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ctggacgccc	tcctcttttg	aatcttcctg	gtggtttacg	tgctcactgt	gctggggaac	120
ctcctcatcc	tgctgggtgat	cagggtggat	tctcacctcc	acacccccat	gtactacttc	180
ctcaccaacc	tgctcttcat	tgacatgtgg	ttctccactg	tcacgggtgcc	caaaatgctg	240
atgaccttgg	tgctccccaag	cggcaggggt	atctccttcc	acagctgcgt	ggctcagctc	300
tattttttcc	acttcctggg	gagcaccgag	tgtttctctt	acacagtcac	gtcctatgat	360
cgctacttgg	ccatcagtta	cccgtccagg	tacaccagca	tgatgagtgg	gagcaggtgt	420
gccctcctgg	ccaccggcac	ttggctcagt	ggctctctgc	actctgctgt	ccagaccata	480
ttgactttcc	atgtgcccta	ctgtggaccc	aaccagatcc	agcactactt	ctgtgacgca	540
ccgccccatcc	tgaaactggc	ctgtgcagac	acctcagcca	acgtgatggg	catcttttgt	600
gacattggga	tagtggcctc	aggctgcttt	gtcctgatag	tgctgtccta	tgtgtccatc	660
gtctgttcca	tcctgcggtat	ccgcacctca	gatgggaggc	gcagagcctt	tcagacctgt	720
gcctcccaact	gtattgtggg	cctttgcttc	tttgttccct	gtgttgatcat	ttatctgagg	780
ccaggctcca	tggtatgcat	ggatggagtt	gtggccattt	tctacactgt	gctgacgccc	840
cttctcaacc	ctgttggtga	caccttgaga	aacaaggagg	tgaagaaagc	tgtgttgaaa	900
cttagagaca	aagtagcaca	tcctcagagg	aaa			933

<210> 322

<211> 953

<212> DNA

<213> Unknown (H38g171 nucleotide)

<220>

<223> Synthetic construct

<400> 322

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tgggaaatgt tttctctctc aattttacaa cttccttaga tgtacactgt ggccctctca      120
gggacatcta ttctgatttt cttgatcttag acagatttct gagttcacac atcattgtac      180
tctttctgag ttctcattga tatagccatt tctgttgta aaattggtat tgaggttttc      240
tctggaaaga taaacttctc acatactggt tgtggaactc agattttctt ctttctgact      300
gctggcattt tcaaatatgt ccttctcact tatatggctt atgaccataa cgtggctatc      360
tgtgcctgag tgaccaacct tcatgagtga tcaggctctc tagcaatggg cagtagagtc      420
ttggattgga ggaaaaacttt cttctttggc tcataccatt tatatttttc atttattcag      480
ctataagca aaggagatta gccacttatg gccaagctc ttttaaagct cctctgtggg      540
gatccccat atacaaaatg atgttttttt cacaataatt acattcttgt tcaccctgct      600
tctcttact ctgaccttat cctccaagct tattgtgttc actatcctac acatgaaactc      660
ctcaaatggg ggagcaaaagt cttggccaca tactgctttc atctgagtgt gctgattccc      720
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accagaccat gtctgcttga cagcataatt atatccacgt tgaaaccctc gatagacatt      840
ctgaagaatg cagaagtggc aggagcttgg agcaagttct tgtaaaagaa agcgctaaaa      900
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<210> 323

<211> 960

<212> DNA

<213> Unknown (H38g172 nucleotide)

<220>

<223> Synthetic construct

<400> 323

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ttgggattaa aggatcttcc agagcttcag cccatcctct ttgtactgtt cctgctaate      120
tacctgatca ctgtcggggg gaaccttggg atgttggtgt tgatcaggat agattcacgc      180
ctccacccc ccatgtattt ctttcttgct agtttgctct gcttggattt gtattactcc      240
actaatgtga ctcccaagat gttggtgaac ttcttctcag acaagaaagc catttccat      300
gctgcttgtt tagtccagt ctattttttc attgctgtgg tgattactga atattatatg      360
ctagctgtaa tggcctatga taggtatgtg gccatctgta accctttgct ttacagcagc      420
aagatgtcca aagggtctctg tattcgctg attgctggct catatgtcta tgggtttctt      480
agtggactga tggaaacat gtggacatac cacttgacct tctgtggctc caatatcatt      540
aatcacttct actgtgctga cccacccctc atccgacttt cctgctctga cactttcatt      600
aaggaaacat ccatgtttgt ggtagcatga tttaacctct ccagctccct catcataatc      660
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cgcaaagcgt tctccacctg cgggtccac ctggtggcag tgactgtgtt ttatggaacc      780
ctgttctgca tgtacgttag acctccacg gacaggtcag tggaacagtc caaagtcatt      840
gctgttttct acatttttgt aagccctatg ttgaacccca tcatctatag tttgaggaac      900
aaggatgtga aacaagcttt ttggaaactg atcagaagaa acgtgctttt gaagtaaaat      960

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<210> 324

<211> 705

<212> DNA

<213> Unknown (H38g173 nucleotide)

<220>

<223> Synthetic construct

<400> 324

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acagattca tcctcatgga ctttcccat gtccagctc tggacgccc actctttgga      120
gtcttcttg tggtttatgt gcttactgtg ctggggaacc tctcctcct gctggtgatc      180
agggtgtact ctacactcca ccccccaag tactacttcc tcaccaatct gtccttcatt      240
gacttgtggt tcttactgt catggtgccc aaaatgccga ggaccttgtt gtccctgtgt      300
ggcaaggctg tgtccttcca cagttgtatg acccaactct atttcttcta cttcctgggg      360
agcaccgagt gtttgcctca cacggtcatg tcctatgac gctatagagg aaatactcag      420
cacttcccag gtagtgaaaa cactccccac gaagtgagcc aaatgctagt ggccggggg      480
gcacacgggc tcccactcat catcctggca gatctgagt ggtaactaag agttgatagt      540

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tcttagtggg caattcaaaa ttagtaatat aatttagtta tccaagtga atttattaca	600
tgtatagggt tcagcattaa acattattcc aaacaacttg cacagttata attctttcac	660
agattatcta agacattttt aaattcacag ctagattttt attta	705

<210> 325

<211> 921

<212> DNA

<213> Unknown (H38g174 nucleotide)

<220>

<223> Synthetic construct

<400> 325

atgatcaccg agttcatcct tataggcttc tcaaacctgg gggatctgca gatecttctc	60
ttctttatct tcctattagt ctacctgacc actctgatgg ccaacaccac catcatgaca	120
gtcattcacc tggacagggc tttgcacact cctatgtact tcttctctt tgtcctttca	180
tgttctgaaa cctgctacac cttgggtcatt gtacccaaaa tgcttaccaa cctgctatcc	240
gcaattccaa ctatttcttt ctctggatgt gtgggtccagc tctatttatt tgtgggcttg	300
gcttgtagca actgttttct cattgctgtg atgggtacg atcgctatgt tgccatctgc	360
aacccctta actacacact cattgtcagc tgagccacct gcctgcagct ggttctagcc	420
tccagctttt gtggcttctt gacttctgtg attgtcaata tctgtgtgtt cagtgtgctc	480
ctctgtgcct ccaatcggat caaccacttt ttctgtgaca ttccctctgt cataaaactg	540
ggctgcacag acaccaacct gaaggagatg gtcattcttt tctcagcat tctggattg	600
ctggttcccc ttgtgttgat attcatctcc tacatcttca tagtttccac catcctcaag	660
atctcctcag tggaaaggaca gtgcaaagcc ttcgccacct gtgcttccca cctcacagt	720
gtcgtcgtcc actatggctg tgccttcttt atctaactga ggcccacatc cctgtactct	780
tcagataagg accggctcgt ggcagtgact tatactgtga ttactccact actcaacccc	840
cttgtctata cactgagaaa taaagaagta aagatggctc tgagaaaggt tctgggtaga	900
tgcttaaatt ccaaaactgt a	921

<210> 326

<211> 470

<212> DNA

<213> Unknown (H38g175 nucleotide)

<220>

<223> Synthetic construct

<400> 326

atttgccaca atagaaaagt catccctgca tctatgtgaa atatgtttta tttctcttga	60
aagttgccta agacaatttt ctgcatgtac tgttcatact agctaaaact gctccccact	120
cttattcctc taggaaattc ctagtatttt ttcaagcccc agttagatta ttgtcctttg	180
atgcttaccc tgattcctga aacaattagt tattttgttt gtatttttat tattgaaacta	240
atcatattta actttaattt tcatgtctct taccatgaaa atcaaccagc tctttcaagg	300
caagcactgt gatcagttgt cttcaattcc ccagcaaagc aacttgcatg catggagtgt	360
tcagtgtctg ttgtgcacaa atgtaacct attacaatgg ttaaatcatt tagcatcctg	420
aaagcatcac agagtcaaag tagctaactt gtgtgaacc ttaattcaat	470

<210> 327

<211> 959

<212> DNA

<213> Unknown (H38g176 nucleotide)

<220>

<223> Synthetic construct

<400> 327

gggaccaagt caatcaagct aacttctctg tcagagttcc tgcttcttga gttctccagc	60
cttgaagaaa tccagcagat cctttttctg tctgcttctg gctatatctg attgttctga	120
gtggaaatat caccactgtc actgtcatcc gctggatca aagcctccac atacctgtat	180
acttattcct agggatcctc tccatttctg ggacatgcta tacctttgtc attctgcccc	240

agatgctcat	agatctgttg	tctttgctca	gaacaatctc	atttattaac	tgccactcca	300
gtgttcttct	ttctgggttt	tgctgtcact	aatttcatgt	tcctgggcat	gacagtttat	360
gattcctatg	ttgccatctg	ccatccactt	cactaccctg	tccttacgag	ctggcagata	420
tgtaaacac	tggcagcaac	gtgtgctgtg	attgtttttt	tttgtttgtt	tgttttcact	480
gataggctcc	ttcttagatt	ttcagctgct	tttctgtggc	ccaaacaaga	tcaaccacta	540
cttctgtgac	atctcactgc	ttattcagct	tgctgtact	gataacctaca	tcagggagct	600
agtcactctc	attgggtggaa	ttctagcact	tacggttcct	ctgattttat	ttgcatctcc	660
tatggcttca	ttgttcacac	catectgagg	atcccatatg	tgaaagcaag	caaaaagcca	720
tctctacttg	tgccctcccat	cttattatgg	tcgttgctca	ttatggctgt	gcctcctttg	780
tcaacctgtg	accatcagcc	aaataatcat	ccagcaaata	accatctagc	aagaacaggc	840
tggtgacagt	gaccttacac	agttgtgact	ccgttggtga	atccatggta	tatagtctca	900
agaataagaa	cgttcagatg	gccatttgga	aagtgatttg	ccaaggagga	tttctcct	959

<210> 328

<211> 952

<212> DNA

<213> Unknown (H38g177 nucleotide)

<220>

<223> Synthetic construct

<400> 328

atgagaagaa	actgtacatt	ggtgactgag	ttcattctcc	tgggactggc	caatcaccgg	60
gaattacaga	ttttctctct	cacgctgttt	ctcaccattt	acatggtcac	ggtggcagga	120
aatcttggca	tgattgccct	catccaggcc	aacgccccgg	ctccacacgc	ccatgtactt	180
tttctgagc	aacttatcct	ttgtggatct	gtgcttctct	tccaatgtga	ctccaaggat	240
gctggagatt	ttcctttcag	agaagaaaag	catttcctat	cctgcccgtc	ttgtgcagtg	300
ttaccttttt	atcaccttgg	tccacgttga	gctctacatc	ctggctgtga	tggcctttga	360
ccggtacatg	gccatctgca	accctctgct	ttatggcagc	agaatgtoca	agagcgtgtg	420
ctctttctct	atcacagtgc	tttatgtgta	tggagcactc	actggcctga	tggagactat	480
gtggacctac	aacctagcct	tctgtggccc	cagtgaatt	aatcacttct	actgtgtgga	540
cccaccactg	attaagctgg	cttgttctga	cacctacaac	aaggagggtg	caatgtttgt	600
tgtggctggg	ttcaacttca	cttatcctct	ccttatcctc	ctcatttctc	atctctacat	660
atttctctgcc	accctaagga	tctgctctac	agaaggcagg	cacaaagctt	tttctacctg	720
tggctcccat	ctgacagccg	ttactatttt	ctattcagct	cttttcttca	tgtatctcag	780
acgtccatca	gaagagtcca	tggagcaggg	gaaaatggta	gctgtatttt	ataccactgt	840
aatccccatg	ttgaatccca	tgatctacag	tctgaggaac	aaagatgtga	aagaggcatt	900
atgcaaaagaa	ctgttcaaaa	gaaaattggt	ttctaataaa	acattactac	tg	952

<210> 329

<211> 949

<212> DNA

<213> Unknown (H38g178 nucleotide)

<220>

<223> Synthetic construct

<400> 329

acagatgtct	gagaattcct	cctcctggga	ctctcagagg	atccagaact	gcagccgggtc	60
ctcgcttttg	tgtccctgtc	cctgtccatg	tatctgggtca	cgggtgctgag	gaacctgtctc	120
agcatcctgg	ctgtcagctc	tgactcccc	ctccacaccc	ccatgtactt	cttctctctc	180
aacctgtgct	ggcctgacat	cggtttcacc	tgggcatatg	ttcccaagat	gattgtggac	240
acgcagctgc	atagcagagt	catctctcat	cgggctgcgc	tgacacagat	gtctttcctg	300
ctccttgttg	catgtataga	aggcatgtct	ctgactgtga	tggcctatga	ctgctttgtga	360
gccatctgtc	gcccctctgca	ctacccaatc	atcgtgaatc	ctcacctctg	tgtcttcttc	420
gttttgggtg	cctttttcct	tagcctgttg	gattcccagc	tgcacagttg	gattgtgtta	480
caattaacca	tcatacaagaa	tgtggaaatc	tctaatttgg	tctgtgaccc	ctctcaactt	540
ctcaaacttg	cctgtttctga	cagcgtcatc	aataacatat	tcatatattt	cgatagtact	600
atgtttgggt	ttcttcccat	ttcagggatc	tttttgcctt	actataaaat	tgtccctctc	660
attctaagga	tttcatcgct	agatgggaag	tataaagcct	tctccacctg	tggctgtcat	720
ctagcagttg	tttgcctgggt	ttatggaaca	ggcattgggt	tgtacctgac	ttcagctggg	780

tcaccacctc	ccaggaatgg	tgtgggtggct	tcagtgatgt	acgctgtggt	caccccatgc	840
tgaacctttt	catctgcagc	ctgagaaaca	gggacataca	aagtgccttg	cggaggctgc	900
gcagcagagc	agtcgaatat	catgatctgt	tccatccttt	ttcttgtgt		949

<210> 330

<211> 942

<212> DNA

<213> Unknown (H38g179 nucleotide)

<220>

<223> Synthetic construct

<400> 330

atgcgagggt	tcaacaaaac	cactgtgggt	acacagttca	tcctgggtggg	tttctccagc	60
ctgggggagc	tccagctgct	gctttttgtc	atctttcttc	tcctatactt	gacaatcctg	120
gtggccaatg	tgaccatcat	ggccgttatt	cgcttcagct	ggactctcca	cactcccatg	180
tatggctttc	tattcatcct	ttcattttct	gagtcctgct	acacttttgt	catcatccct	240
cagctgctgg	tccacctgct	ctcagacacc	aagaccatct	ccttcatggc	ctgtgccacc	300
cagctgttct	ttttccttgg	ctttgcttgc	accaactgcc	tcctcatttg	tgtgatggga	360
tatgatcgct	atgtagcaat	ttgtcaccct	ctgagggtaca	cactcatcat	aaacaaaagg	420
ctgggggttg	agttgatttc	tctctcagga	gccacagggt	tctttattgc	tttgggtggc	480
accaacctca	tttgtgacat	gcgtttttgt	ggccccaaca	gggttaacca	ctatttctgt	540
gacatggcac	ctgttatcaa	gttagcctgc	actgacaccc	atgtgaaaga	gctggcttta	600
tttagcctca	gcacccctgt	aattatgggt	ccttttctgt	taattctcat	atcctatggc	660
ttcatagtta	acaccatcct	gaagatcccc	tcagctgagg	gcaagaaggc	ctttgtcacc	720
tgtgcctcac	atctcactgt	ggtctttgtc	cactatggct	gtgcctctat	catctatctg	780
cggcccaagt	ccaagtctgc	ctcagacaag	gatcagttgg	tggcagtgac	ctacacagtg	840
gttactccct	tacttaatcc	tcttgtctac	agtctgagga	acaaagaggt	aaaaactgca	900
ttgaaaagag	ttcttggaaat	gcctgtggca	accaagatga	gc		942

<210> 331

<211> 942

<212> DNA

<213> Unknown (H38g180 nucleotide)

<220>

<223> Synthetic construct

<400> 331

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ccagagcagc	aaaacctgtg	ctatgccctg	ttcttggcca	tgtatcttac	cacctcctg	120
gggaacctcc	tcatcattgt	cctcatttga	ctggactccc	atctccacac	gcctatgtat	180
ttgtttctca	gcaacttgct	cttctctgac	ctctgcttct	cttccgtgac	cattcccaag	240
ttgttacaga	acatgcagaa	ccaggaccca	tccatccctt	atgcggactg	cctgacccaa	300
atgtacttct	tcctgttatt	tggagacctg	gagagcttcc	tccttgtggc	catggcctat	360
gaccgctatg	tggccatctg	cttccccctg	cactacaccg	ccatcatgag	ccccatgctc	420
tgtctcgccc	tgggtggcgt	gtcctgggtg	ctgaccacct	tcctatgcat	gttacacact	480
ttactcatgg	ccagggttgg	tttttgtgca	gacaatgtga	tccccactt	tttctgtgat	540
atgtctgctc	tgtgaagct	ggccttctct	gacactcgag	ttaatgaatg	ggtgatattt	600
atcatgggag	ggctcattct	tgtcatccca	ttcctactca	tccttgggtc	ctatgcaaga	660
attgtctcct	ccatcctcaa	ggtcccttct	tctaagggtg	tctgcaaggc	cttctctact	720
tgtggctccc	acctgtctgt	ggtgtcactg	ttctatggaa	ccgttatttg	tctctactta	780
tgtcatcagc	ctaatagttc	tactctaaag	gacactgtca	tggctatgat	gtacactgtg	840
gtgaccccca	tgttgaaccc	cttcatctac	agcctgagga	acagagacat	gaagggagcc	900
ctgagcagag	tcattcatca	gaagaaaact	ttcttctctc	tc		942

<210> 332

<211> 822

<212> DNA

<213> Unknown (H38g181 nucleotide)

<220>

<223> Synthetic construct

<400> 332

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accataataa atgtcaatat tagtcctgag tttgtccttg tgggattttc cagtgatgca      60
gagatccaga tcatgtctct tgtgctaata ctgggtgattc atctcctgac tttgacgggg      120
aagctgggtga tgatcctgga gatcagggct gattctcacc ttcaaagacc catgtacttc      180
ttcctttgac atctgtcctt tctgggatctc agctactcct agttactgtg cccaggatgc      240
tacaaaattt cctctcagaa gaaaagcctc tcaatgtggg gctgcctcac caagtttctt      300
tttcaactct tctgggggaa cggaagcctg tctgttctct gccatggcct atgatcacta      360
tgctaccatc cgccaccctg tgggtctatac catggtcctg aacagatctc tctgtatggg      420
gattttgaga attgcttgagg cagcgggatt tctgatttcc ttgatggaca gtcttttcac      480
ccacaagtta catttctgtg ggcctgacat catccttatt tcagggtgtaa gctgcctcca      540
ttcttccctc tgctctacat tgatccact gtcaatgaga ttcttctagc tgtgtcacag      600
gcattctggg ggctactgac actttcccta atcttctctc cttactctag aatcacatct      660
gtcatactga gcatctgtct ctctgagggc caaggcaaag ccttctccgc atgcccttct      720
catctcgctg tggttctctc attctatggg acagcttttt tcagataccc aggccttact      780
tcaggttcgg tgttggggca agtggctctc gttcagtata gt      822

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<210> 333

<211> 935

<212> DNA

<213> Unknown (H38g182 nucleotide)

<220>

<223> Synthetic construct

<400> 333

```

atgagaagga acttcacgtt ggtgactgag ttcattctcc tgggactgac gaatcaccag      60
gaattacaga ttctcctctt catgctgttt ctggccattt acatgggtcac agtggcaggg      120
aatcttagca tgattgcctt catccaggcc aatgcccggc tccacacgcc catgtacttt      180
ttccttagcc acttatcctt cctggatctg tgcttctctt ccaatgtgac cccaaagatg      240
ctggagattt tcctttcaga gaagaaaagc atttccctatc ctgcctgtct tgttcagtgt      300
tacctttata tcatcttggt acacgttgag atctacatcc tggctgtgat ggcctttgac      360
tagtacatgg ccatctgaaa ccctctgctt tatggcagca aaatgtccaa aagtgtgtgt      420
tccttctctc tcacggtgcc ttatgtgtat ggagcgctca ctggcctgat ggagaccatg      480
tggacctaca acctagcctt ctgtggcccc aacgaaatta atcacttcta ctgtgcagac      540
ccaccactga ttaagctggc ttgttctgac acctacaaca aggagtgtgc aatgtttgtt      600
gtggctgggt ggaatctttc gttttctctc ttcatctatc ttatttcta cttttacatt      660
tttctgcta tcttaaggat tctgctctaca gagggcaggg aaaaagcttt ttctacctgt      720
ggctcccatc tgacagctgt tactattttc tatgcaactc tgttcttcat gtgtctcaga      780
cctccatcag aagagtccat ggagcaagga caaatggtag ctgtacttta taccactgtg      840
atccccatgt taatcccatg atctacagtc tgaggaacaa ggatgtgaaa aaggctttat      900
ccaaagaact gttcaaaaaga aaattgtttc ctaaa      935

```

<210> 334

<211> 945

<212> DNA

<213> Unknown (H38g183 nucleotide)

<220>

<223> Synthetic construct

<400> 334

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atggagccag aagctgggac caataggacc gctgttgctg agttcattct actgggccta      60
gtgcaaacag aagagatgca gccagttgtc tttgtgctcc tctcttttgc ctatctgggc      120
acaattgggg gcaacctcag catcctggca gccgtcttgg tggagcccaa actccacgcc      180
cccatgtact tcttctctggg gaacctatca gtgctggatg tcggatgtat cactgtcact      240
gttcttgcaa tgttgggtcg tctcttgtcc cacaagtcca caatttcta tgacgctgc      300
ctctccagc tcttcttctt ccacctctcg gctgggatgg actgcttctc gctgaccgcc      360
atggcctatg accgactcct ggccatctgc cagccctca cctacagcac ccgcatgagt      420

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cagacagtcc	agaggatggt	ggtggctgcg	tcctgggctt	gtgccttcac	caacgcactg	480
acccacactg	tggccatgtc	cacgctcaac	ttctgtggcc	ccaatgaggt	caatcacttc	540
tactgtgacc	tcccacagct	cttccagctc	tcctgtctca	gcacccaact	caatgagctg	600
ctgctctttg	tagcagcagc	cttcatggct	gtggcaccct	tgggtcttcat	cagtgtgtcc	660
tatgcccattg	tggtagctgc	tgtgctgcaa	atccgctctg	ctgagggcag	aaagaaggcc	720
ttctccacat	gtggctccca	cctcactgtg	gtgggcatct	tctatgggac	aggtgtcttc	780
agctacatga	ggctgggttc	agtggaatct	tcagacaagg	ataagggggg	tgggggtttc	840
atgactgtga	tcaaccccat	gctgaaccca	cttatctaca	gcctcagaaa	tactgatgtt	900
cagggcgctc	tgtgtcagct	acttgtgggg	gagcgatcac	tgacc		945

<210> 335

<211> 950

<212> DNA

<213> Unknown (H38g184 nucleotide)

<220>

<223> Synthetic construct

<400> 335

atgctaagga	atggcagcat	agtgcaggaa	tttatcctcg	tgggctttca	gcagagctcc	60
acttccacac	gagcattgct	ctttgcectc	ttcttggccc	tctacagcct	caccatggcc	120
atgaatggcc	tcattcatctt	tatcacctcc	tggacagacc	ccaagctcaa	cagcccccattg	180
tactttcttc	tgggcctctg	tctctcctgg	atgtctgctt	catcaccact	accatcccac	240
agatgttgat	ccacctcgtg	gtcagggacc	acattgtctc	ctttgtatgt	tgcatgaccc	300
agacgtactt	tgtcttctgt	gttgggtgtg	ccgagtgcac	cctcttggct	ttcatggcct	360
atgaccgtta	tgttgctatc	tgctacccac	ttaactatgt	cccgatcata	agccagaagg	420
tctgtgtcag	gcttgtggga	actgcctggt	tctttgggct	gatcaatggc	atctttctcg	480
agtatatattc	attccgagag	cccttccgca	gagacaacca	catagaaaagc	ttcttctgtg	540
aggcccccat	agtgattggc	ctctcttgtg	gggaccctca	gtttagtctg	tgggcaatct	600
ttgccgatgc	catcgtggta	attctcagcc	ccatgggtgct	cactgtcact	tcctatgtgc	660
acatcctggc	caccatcctc	agcaaaagcct	cctcctcagg	tggggggaag	actttctcta	720
cttgtgcctc	tcacctgact	gtggtcatct	ttctctacac	ttcagctatg	ttctcttaca	780
tgaacccccca	cagcacacat	gggcctgaca	aagacaaaacc	ttctccctc	ctgtacacca	840
tcattacccc	catgtgcaac	cccatcattt	atagtttccg	caacaaggaa	attaaggagg	900
ccatgggtgag	ggcacttgga	agaaccaggc	tggcccagcc	acagtctgtc		950

<210> 336

<211> 972

<212> DNA

<213> Unknown (H38g185 nucleotide)

<220>

<223> Synthetic construct

<400> 336

atgtttttact	tctttccccc	tttgcagatc	ttggcagaaa	acctcaccat	ggtcaccgaa	60
ttcctgtttgc	tgggtttttc	cagccttggg	gaaattcagc	tggccctctt	tgtagttttt	120
ctttttctgt	atctagtcat	tcttagtggc	aatgtcacca	ttatcagtgt	catccacctg	180
gataaaaagcc	tccacacacc	aatgtacttc	ttccttggca	ttctctcaac	atctgagacc	240
ttctacacct	ttgtcattct	acccaagatg	ctcatcaatc	tactttctgt	ggccaggaca	300
atctccttca	actgttgtgc	tcttcaaatg	ttcttcttcc	ttgggttttg	cattaccaac	360
tgccctgcat	tgggtgtgat	gggttatgat	cgctatgctg	ccatttgtca	ccctctgcat	420
taccccatc	ttatgagctg	gcaggtgtgt	ggaaaactgg	cagctgcctg	tgcaattggg	480
ggcttcttgg	cctctcttac	agtagtaaat	ttagttttca	gcctcccttt	ttgtagcgcc	540
aacaaagtca	atcattactt	ctgtgacatc	tcagcagtca	ttcttctggc	ttgtaccaac	600
acagatgtta	acgaatttgt	gatattcatt	tgtggagtcc	ttgtacttgt	ggttcccttt	660
ctgtttatct	gtgtttctta	tctctgcatt	ctgaggacta	tcctgaagat	tcctcagct	720
gagggcagac	ggaaagcggt	ttccacctgc	gcctctcacc	tcagtgttgt	tattgttcat	780
tatggctgtg	cttcccttcat	ctacctgagg	cctacagcaa	actatgtgtc	caacaaagac	840
aggctgggtga	cggtgacata	cacgattgtc	actccattac	taaaccccat	ggtttatagc	900
ctcagaaaca	aggatgtcca	acttgcctatc	agaaaagtgt	tgggcaagaa	aggttctcta	960

aaactatata at

972

<210> 337

<211> 982

<212> DNA

<213> Unknown (H38g186 nucleotide)

<220>

<223> Synthetic construct

<400> 337

aagcttcaat	ttaaacaattt	tactgaagtc	accatgttta	tattaataag	cttcacagaa	60
gaatttgatg	tgcaagtctt	cctatTTTTT	ttatTTTTtag	caatctatct	attcactcta	120
ataggcaatt	tagggctggt	tgtaccgatc	attggggatt	tctggcttca	cagcccaatg	180
tactattttc	ttggtgtttt	atcattcttg	gatgtctgct	attctacagt	tgtcactcca	240
aaaatgttgg	tcaatttctt	ggcaaaaaat	aaatctattt	catttcttgg	atgtgcaaca	300
cagatgtttc	ttgcttgtac	ttttggaacc	acagaatgct	ttctcttggc	tgcaatggct	360
tatgatcgct	atgtagccat	ctacaaccct	ctcctgtatt	cagttagcat	gtcaccacaga	420
gtctatgtgc	cactcatcac	tgcttcctat	gttgctagca	ttttacatgc	tactatacat	480
acagtggcta	catttagcct	gtccttctgt	ggatccaatg	aaattaggca	tgtcttttgt	540
aataatgcct	cctctgcttg	ctatttcttg	ttctgacact	cacgtaatcc	agcttctatt	600
cttctacttt	gtgggctcta	ttgagatagt	cactatcctg	attgtcctga	tctcctatgg	660
ttttattctg	ttggccattc	tgaagatgca	gtctgctgaa	gggaggagaa	aagtcttctc	720
tacatgtgga	gtcacctaa	ctggagtgc	aatttatcat	gggacaatcc	tcttcattga	780
tgtgagacca	agttccagct	acacttcgga	caatgacatg	atagtgtcaa	tattttatac	840
cattgtgatt	cccatgctga	atcccatcat	ctacagtttg	cggaacaaag	atgtaaagga	900
ggcaatcaaa	agattgcttg	tgagaaattg	gttcataaat	aagttatagt	tttaaaattg	960
agtaaagttg	caaataatat	tg				982

<210> 338

<211> 962

<212> DNA

<213> Unknown (H38g187 nucleotide)

<220>

<223> Synthetic construct

<400> 338

atggatagag	taaataattc	tgcggtatct	aaatttgtat	tgatttggac	tttccaagcc	60
tccttgggag	atgcatcttt	ttcttttttg	gttcttctct	gtgttctaca	tggaattat	120
cctggaaaat	ctcttcattg	tggtcacagt	aattattgac	tctcatttaa	attccccagg	180
tactgcctac	tgccaacat	ttatcttctt	gatctgggtc	ttctcctaca	gttctgactt	240
tttactaac	tgagcatca	tttcttttcc	aagatgcac	atacagatat	ttttcatttg	300
tgtcatgcgt	aaaaattgag	atgggtgctg	tcataaccat	ggcatagagc	aggtacactg	360
ccaatctgta	agcctcccca	ttacctgacc	acaatgaacc	ccaaaatgtg	tgtttccttt	420
gttggaggca	tcctggatag	tcaggataat	ccatgctgta	tctcagtttg	tttttgccat	480
aaacttgcc	ttttgtggcc	ctaataagag	aggtagtttt	cactgtgatt	ttccttatgt	540
catgaaactt	gcttgtgtag	acacttacaa	actagagggt	gtagtcactg	ctaacagtgg	600
gcttatatcc	atagctacct	gtttcttatt	aataatatcc	tatattttca	tttcggtaac	660
cgtctagaat	ccttcttcag	gagacttata	taaagcattt	gtgtcatggt	agatcacatc	720
acagtaggga	ttttgttttt	tatgccatgt	atatttctgt	atgtgtagcc	tttgcctaaa	780
acaacacatg	attaatat	gttcattggt	ccttttgcta	tcaccctgt	ctaggatcta	840
cacattaaga	aacaaagaca	tgaacgtctc	catggaaaga	ctgggaaaat	ggattgcagg	900
ttctagcagg	atgtcataat	aaatggtgca	tatccagagt	gcaagatgat	tcagtctcac	960
ca						962

<210> 339

<211> 972

<212> DNA

<213> Unknown (H38g188 nucleotide)

<220>

<223> Synthetic construct

<400> 339

atgaccacca	taattctgga	agtagataat	catacagtga	caacacgttt	cattcttctg	60
gggtttccaa	cacgaccagc	cttccagctt	ctctttttct	ccattttcct	ggcaacctat	120
ctgctgacac	tgctggagaa	tcttcttata	atcttagcta	tccacagtga	tgggcagctg	180
cataagccca	tgtacttctt	cttgagccac	ctctccttcc	tggagatgtg	gtatgtcaca	240
gtcatcagcc	ccaagatgct	tgttgacttc	ctcagtcagt	acaagagtat	ttccttcaat	300
ggctgcatga	ctcaacttta	cttttttgtg	acctttgtct	gcactgagta	catccttctt	360
gctatcatgg	cttttgaccg	ctatgtagcc	atttgtaata	cactacgcta	cccagtcata	420
atgaccaacc	agctctgtgg	cacactggct	ggaggatgct	ggttctgtgg	actcatgact	480
gccatgatta	agatgggttt	tatagcacia	cttcaactat	gtggcatgcc	tcagatcaat	540
cactactttt	gtgatatact	tccactcctt	aacgtctcct	gtgaggatgc	ctcacaggct	600
gagatgggtg	acttcttctt	ggccctcatg	gtcattgcta	ttcctctttg	tgttgtgggtg	660
gcacccatcg	ctgctatcct	tgccaccatc	ctcaggatcc	cttctgtctc	gggccgccaa	720
aaggcattct	ccacctgtgc	ctcccacctg	accgtcgtaa	ttctcttcta	ttccatgaca	780
cttttcacct	atggccgtcc	caaactcatg	tatgcctaca	attccaacaa	agtgggtatct	840
gttctctaca	ctgtcattgt	tccactcctc	aacccccata	tttactgtct	gaggaaccat	900
gaagtaaagg	cagccctcag	aaagaccata	cattgcagag	gaagtgggccc	ccagggaat	960
gggctttca	gt					972

<210> 340

<211> 969

<212> DNA

<213> Unknown (H38g189 nucleotide)

<220>

<223> Synthetic construct

<400> 340

atgatgggac	aaaatcaaac	cagcatctca	gacttctctg	tcctgggcct	gcccattccaa	60
ccagagcagc	aaaacctgtg	ctatgccctg	ttcttggcca	tgtatcttac	cacctctctg	120
gggaacctcc	tcattcattgt	cctcattoga	ctggactccc	atctccacac	gcctgtgtat	180
ttgtttctca	gcaacttgct	cttctctgac	ctctgctttt	cctcagtcac	aatgccccaa	240
ttgctgcaga	acatgcagaa	ccaagaccca	tccatccccct	atgcagactg	cctgacccaa	300
atgtacttct	tcttgtatct	ttcggatcta	gagagcttcc	tccttgtggc	catggcctat	360
gaccgctatg	tggccatctg	cttccccatg	cactacaccg	ccatctgctt	cctcctgcac	420
tacaccgcca	tcattgagccc	catgctctgt	ctctccgtgg	tggcgctgtc	ctgggtgctg	480
accaccttcc	atgccatggt	acacacttta	ctcatggcca	ggttgtgttt	ttgtgcagac	540
aatgtgatcc	cccacttttt	ctgtgatatg	tctgctctgc	tgaagctggc	ctgctctgac	600
actcgagtta	atgaatgggt	gatattttat	atgggagggc	tcattcttgt	catccatttc	660
ctactcatcc	ttgggtccta	tgaagaatt	gtctcctcca	tcctcaaggt	cccttcttct	720
aagggtatct	gcaaggcctt	ctctacttgt	ggctcccacc	tctctgtggc	gtcactgttc	780
tatgggaccg	ttattgggtc	ctacttatgc	ccatcagcta	atagttctac	tctaaaggac	840
actgtcatgg	ctatgatgta	cactgtgggt	accctatgc	tgacccctt	catctacagc	900
ctgaggaaca	gagacatgaa	gggagccctg	gaaagggtca	tttgtaaaaag	gaaaaatccc	960
ttccttcta						969

<210> 341

<211> 933

<212> DNA

<213> Unknown (H38g190 nucleotide)

<220>

<223> Synthetic construct

<400> 341

atgggtagaa	gaaataaacac	aaatgtgcct	gacttcatcc	ttacgggact	gtcagattct	60
gaagaggctc	agatggccct	ctttatacta	tttctcctga	tatacctaata	tactatgctg	120
ggcaatgtgg	ggatgatatt	gataatccgc	ctggacctcc	agcttcacac	tcccatgtat	180

tttttcccta	ctcacttgtc	atttattgac	ctcagttact	caactgtcat	cacacctaaa	240
accttagcga	acttactgac	ttccaactat	atttccttca	tgggctgctt	tgcccagatg	300
ttcttttttg	tcttcttggg	agctgctgaa	tgttttcttc	tctcatcaat	ggcctatgat	360
cgctacgtag	ctatctgcag	tcctctacgt	taccagttta	ttatgtccaa	aaggctgtgt	420
tgcgctcttg	tactggggcc	ctatgtgatt	agctttatca	actcctttgt	caatgtgggt	480
tggatgagca	gactgcattt	ctgcgactca	aatgtagttc	gtcacttttt	ctgcgacacg	540
tctccaattt	tagctctgtc	ctgcatggac	acatacgaca	ttgaaatcat	gatacacatt	600
ttagctgggt	ccaccctgat	ggtgtccctt	atcacaatat	ctgcatccta	tgtgtccatt	660
ctctctacca	tcctgaaaat	taattccact	tcaggaaagc	agaaagcttt	gtctacttgt	720
gcctctcatc	tcttgggagt	caccatcttt	tatggaacta	tgatttttac	ttatttaaaa	780
ccaagaaagt	cttattcttt	gggaagggat	caagtggctt	ctgtttttta	tactattgtg	840
attcccatgc	tgaatccact	catttatagt	cttagaaaca	aagaagttaa	aaatgctctc	900
attagagtca	tgcagagaag	acaggactcc	agg			933

<210> 342

<211> 915

<212> DNA

<213> Unknown (H38g191 nucleotide)

<220>

<223> Synthetic construct

<400> 342

atggtgactg	aattcatttt	tctgggtctc	tctgattctc	aggaactcca	gaccttccta	60
tttatgttgt	tttttgtatt	ctatggagga	atcgtgtttg	gaaaccttct	tattgtcata	120
acagtgggat	ctgactccca	ccttcactct	cccatgtact	tctgtctagc	caacctctca	180
ctcattgatc	tgctctctgc	ttcagtcaca	gcccccaaga	tgattactga	ctttttcagc	240
cagcgcaaag	tcattctctt	caagggctgc	cttggttcaga	tatttctcct	tcacttcttt	300
ggtggggagt	agatgggtgat	cctcatagcc	atgggctttg	acagatatat	agcaatatgc	360
aagccccctac	actacactac	aattatgtgt	ggcaacgcac	gtgtcggcat	tatggctgtc	420
acatcgggaa	ttggctttct	ccattcggtg	agccagttgg	cgtttgccgt	gcacttactc	480
ttctgtggtc	ccaatgaggt	cgatagtttt	tattgtgacc	ttcctagggt	aatcaaactt	540
gcctgtacag	atacctacag	gctagatatt	atggtcattg	ctaacagtgg	tgtgtctact	600
gtgtgttctt	ttgttcttct	aatcatctca	tacactatca	tcctaataac	catccagcat	660
cgccctttag	ataagtcgtc	caaagctctg	tccactttga	ctgctcacat	tacagttagt	720
cttttgttct	ttggaccatg	tgtctttatt	tatgcctggc	cattccccat	caagtcatta	780
gataaattcc	ttgctgtatt	ttattctgtg	atcacccttc	tcttgaacct	aattatatac	840
acactgagga	acaaagacat	gaagacggca	ataagacagc	tgagaaaatg	ggatgcacat	900
tctagtgtaa	agttt					915

<210> 343

<211> 936

<212> DNA

<213> Unknown (H38g192 nucleotide)

<220>

<223> Synthetic construct

<400> 343

atggagcggg	tcaatgagac	tgtgggtgaga	gaggtcatct	tcctcggtct	ctcatccctg	60
gccaggctgc	agcagctgct	ctttgttata	ttcctgtctc	tctacctgtt	cactctgggc	120
accaatgcaa	tcattcattt	caccattgtc	ctggacaggg	cccttcata	ccccatgtac	180
ttcttccctg	ccatcctctc	ttgctctgag	atttgcata	ccttcacat	tgtacccaag	240
atgctgggtg	acctgctgtc	ccagaagaag	accatttctt	tcctgggctg	tgccatccaa	300
atgttttcc	tcctcttcc	tggtgtctct	cactccttct	tgctggcagt	catgggttat	360
gatcgttaca	tagccatctg	taaccactg	cgctactcag	tgctaattgg	acatgggggtg	420
tgtatgggac	tagtggctgc	tgctgtgccc	tgtggcttca	ctgttgacac	gatcatcaca	480
tccttggtat	ttcactgccc	tttttattcc	tccaatcaac	tacatcactt	cttctgtgac	540
attgctcctg	tcctcaagat	ggcatctcac	cataaccact	ttagtcagat	tgtcatcttc	600
atgctctgta	cattgggtcct	ggctatcccc	ttattgttga	tcttgggtgc	ctatgttcac	660
atcctctctg	ccatacttca	gtttccttcc	acactgggta	ggtgcaaagc	tttttctacc	720

tgtgtatctc	acctcattat	tgctactgtc	cactatggct	gtgcctcctt	tatctactta	780
aggcctcagt	ccaactactc	ctcaagccag	gatgtctctaa	tatcagtatc	ctacactatt	840
ataactccat	tggtcaaccc	aatgatttat	agcttgagaa	ataaagagtt	caaatcagct	900
ctttgtaaaa	ttgtgagaag	aacaatttcc	ctgttg			936

<210> 344

<211> 732

<212> DNA

<213> Unknown (H38g193 nucleotide)

<220>

<223> Synthetic construct

<400> 344

atgatgattt	cctcagatga	agaaaatgat	acaaatatga	tggaatttat	tctggtagga	60
ctgtccagac	agcctgcac	tcagctactc	ttcttttagg	caatattggt	catctactct	120
gtcaccctgg	ttggtaatat	tctcatcatt	gttattatcc	agattgattc	ccatcttcaa	180
accccatgt	acttctttct	catacaagta	tccttcttag	atatctgctc	cacacccacg	240
gttctgggtga	actgctagaa	ggactttcca	agtgtatcct	atagtggctg	cttattctaa	300
atgactatct	ttctttactt	aggggtgacg	gagtggtgtt	ttttttgtg	ctgttttgag	360
tgttttctta	ttgctgttat	ggcctatgac	aggtttgttg	ccatctcaaa	acccttgtgt	420
tacccattca	ttatcaatag	caatgtttgc	atctggatgg	tggcaggagt	ttggggccat	480
cctggctcgca	ccaatccaat	tctgtggcca	caatgtagtc	aacattttac	atgtgagctc	540
caagtaattt	tcaaactcac	ttgctctcct	gtactagtca	aagagatcca	gtgattcatg	600
attccagggt	gtacattata	ggcattgtat	cagcattaag	tgtgctccta	cagttaagct	660
cgccagcaaa	cccatcccag	gagctgagag	gcatacaatt	agggcataag	gtgagggtatt	720
atcgggggtac	ac					732

<210> 345

<211> 919

<212> DNA

<213> Unknown (H38g194 nucleotide)

<220>

<223> Synthetic construct

<400> 345

acagctggca	gcaatttcac	tgagggtgact	gtcttcatcc	tctctggata	tgcaaatac	60
cctgaattac	aagtcagttt	tttcttgatg	tttctcttca	tttatctatt	cactattttg	120
ggaaacctgg	gactgatcat	gttaatcaga	atggattctc	agcttcacac	ccctatgtac	180
tttttcttca	gcaatttagc	attcattgac	atattttact	cctcttccgt	aacacctaag	240
acattggcga	atttccaatc	caatcagaga	tccatctcct	ttgttggtcg	ctttgttcaa	300
atgtactttt	ctgttggtat	ggtgtgtact	gagtggttcc	tgctggggtc	aatggcctat	360
gattgctatg	tagcaatctg	gaatccctca	ttcagtagtc	atttcttaga	aagcgtgcaa	420
ctggctggga	gtaatgtcat	acacgatagg	tttccaaaat	tctctgggtat	ctgtctgtgt	480
gataagtggg	tttgttctgt	gattccagca	tcaatctttt	ttttctgtga	caccacagct	540
cttttagcac	tgctctgtgt	agatgcattc	agcacagaaa	tgggtagctt	tgcccttagct	600
ggattcactc	ttcttggctc	tatccttata	atcacagtca	cttatatcgc	catcacctca	660
gccatcctga	agaaccagtg	ggcagcagga	tggcagaagg	ccttctccac	ctgcgcattc	720
cacctcatgg	gttaactatc	ttctatgggt	ccctgatttt	cacctatttg	caactggata	780
aaacatcatc	cctgatccac	gcacagttgg	catttgtatt	ctatatgact	gtcattccca	840
tgctgaatcc	actcatctag	agtctgagga	acaaagatgt	aaaaaatgct	ctttgagagt	900
catacataga	aaacttttt					919

<210> 346

<211> 753

<212> DNA

<213> Unknown (H38g195 nucleotide)

<220>

<223> Synthetic construct

<400> 346

atggccaatt	cttcctctgt	cactgagttc	ttagtgctgg	gcttctctag	ccttggggaa	60
ttgcagcttg	tcctctttgc	agtctttctc	tgctcttatt	tgattatctt	gagtggaaac	120
atcatcatca	tctcagtcac	tcatttggtg	cacagcctcc	acacacccat	gtacttcttt	180
ctaggatatt	tttctatctc	tgaaatcttc	tacacaactg	ttattctgcc	caagatgctt	240
atcaacttat	tctctgtatt	caggacactc	tcctttgtga	gttgtgccac	ccaaatgttc	300
ttcttctctg	gttttgctgt	cactaactgt	ctgcttctgg	gagtgatggg	ttatgatcgt	360
tatgtctgcca	tctgtcagcc	tttgcaatac	gctgttctca	tgagctggag	agtatgtgga	420
caactgatag	caacttgatg	tattagtggc	ttcctaatat	ctctgggtgg	aacaactttt	480
gtcttttagcc	tccttttctg	tggtcccaac	aaggtcaacc	actacttttg	tgataattca	540
ccagttatcc	gtctcgcttg	tgctgacagc	tacatcagtg	aactgggtcat	cttcattcttc	600
ggggtcttgg	tgcttgttgt	gcccttgata	tttatctgca	tttctatagg	cttcattgtc	660
cgcaccatcc	tgaagatccc	atcagctgaa	ggcaaacaaa	aagccttctc	cacctgtgct	720
tcccatctca	ttgtagtcat	tgtccattat	ggt			753

<210> 347

<211> 941

<212> DNA

<213> Unknown (H38g196 nucleotide)

<220>

<223> Synthetic construct

<400> 347

atgggtgggc	taaaaagaga	caatgcctct	gagatgactg	aactcatcct	tggtggattt	60
gccaacaccc	ctgaaatcca	gactgccttc	ttcttggaa	tactgttttt	ctactagtca	120
cagcgtttga	gaacatcctt	atcggttctg	tagtgagatg	agattctcga	cttcatactc	180
ctatgggatt	tttttttctt	cagtacctta	tcctcccttg	aaatgtgtta	ctccatcagc	240
tgggagctat	aagtcttggc	tcaatgcac	aaggacttcc	ccaccatctc	ctataacagc	300
tggtctgttc	agatgatcac	acacctcttt	ctggggatga	cagtgtctcc	tccttctgtg	360
catggcttac	aacaggtttg	ttgaaatctc	ttatctcttc	cattacacta	ttattatgag	420
caatcggttc	tgtatacagt	tggtcttggg	aatctggacc	catgccttct	tagtagcagt	480
cacactaatc	attgcaattc	ctgctagtta	ttatggacac	aatgtcatca	accattttac	540
cttgagatcc	aggccctgct	gaagctcgtc	tgctcagaca	cccttctcag	cctgattcag	600
ggctctggta	tcagtgtgtt	cacactgccc	ctgcccttca	cattcatcct	catctcctaa	660
ttttgcattt	ttgttctgct	gtggaggcta	ggcgtgaagc	tttctccacc	tgtggatctc	720
atctgactgg	agtcaccata	ttttatgggg	cagccatctg	catgtacttg	aaacctcagt	780
caaaggggaa	ccaggaagag	gataaagttg	tctcaaaact	ttatggagca	gttactccca	840
tggttaaattc	cccaattttac	attcagagaa	ataaggatat	aaaagggtgca	cttagaaaagt	900
tagccaaagg	aaatgaaaaa	tcctaacagt	tctcttttaa	c		941

<210> 348

<211> 957

<212> DNA

<213> Unknown (H38g197 nucleotide)

<220>

<223> Synthetic construct

<400> 348

atgaatcatg	tggtaaaaa	caatcacacg	gcagtgacca	agggtgactga	atttattctc	60
atggggatta	cagacaaccc	tgggctgcag	gctccactgt	ttggactctt	cctcatcata	120
tatctgggtca	cagtgatagg	caatctgggc	atgggttatct	tgacctactt	ggactccaag	180
ctacacaccc	ccatgtactt	tttctttaga	catttgtcaa	tcactgatct	tggttactcc	240
actgtcattg	ccccgaagat	gttagtaaac	ttcatagtgc	acaaaaacac	aatttctttac	300
aattggatat	ccactcagct	agcattcttt	gagattttca	tcattctctga	gctctttatt	360
ctatcagcaa	tggcctatga	tcgtacagta	gccatctgta	aacctcttct	gtacgtgatc	420
atcatggcag	agaaagtact	ttgggtgctg	gtaattgttc	cctatctcta	tagcacgttt	480
gtgtcactat	ttctcacaat	taagttattt	aaactgtcct	tctgtggctc	aaacataatc	540
agctattttt	actgtgactg	tatccctctg	atgtccatac	tctgttctga	cacaaatgaa	600

ttagaattaa	taattttgat	cttctcaggc	tgtaatttgc	tcttctccct	ctcaattggt	660
ctcatatcct	acatgtttat	tctagtggcc	attctcagaa	tgaactcaag	gaaagggagg	720
tacaaagcct	tctccacctg	tagctctcat	ctgacagtgg	tgatcatggt	ctatggggaca	780
ttgttattta	tttacttgca	acccaagtcc	agtcatactt	tggtatttga	taaaatggcc	840
tcagtgtttt	ataccctggt	gattcctatg	ctgaatccgt	tgatctacag	cctaaggaac	900
aaagaagtaa	aagatgctct	aaagagaact	ttaaccaatc	gattcaaaat	tccatt	957

<210> 349

<211> 471

<212> DNA

<213> Unknown (H38g198 nucleotide)

<220>

<223> Synthetic construct

<400> 349

tttttaaaaa	tgagattaaa	ggaattaatg	taagatagaa	ccataatgga	ttattggagg	60
gaaggtaggc	acatttaggg	gatgttcttg	gcctttccgt	ttggctgacc	tatcccaaaa	120
cttttcctct	gggtctctat	cagagacatg	gcagtaacct	ggatggacca	taggcacgag	180
tcctgtagcc	cattcctccc	gaagctgcag	cctttttcat	cctgccatgt	atctgagtta	240
tgacacgtgc	ttgacacctt	cactaaatca	tatataactt	gaatccgggg	actcaagggg	300
ttcaaccatc	tttgttttct	tctccattac	tgctactgtg	ctagagccca	agtctcctga	360
aatgcgccct	ggagccttgc	tcaaagatgt	caaccaaca	tgctgatcag	gtagctattt	420
tgtctgaagc	tggtagtcca	tgacaggctc	tgacatgtgc	tgagcttgct	c	471

<210> 350

<211> 951

<212> DNA

<213> Unknown (H38g199 nucleotide)

<220>

<223> Synthetic construct

<400> 350

atgggccc	agaatcta	agtgcctt	gaattaat	tgatggaa	cacaaggc	60
cttgagct	agctctcc	tttttggg	ttcctcat	tctgcac	cacagtgg	120
agcaaag	gcataat	tttgaaca	gtggactt	gtctacac	catttgtg	180
ttttttaa	caggtacc	aattttat	atcttggt	ttctatgg	atttatcc	240
agatactg	aaactttg	gtggctca	atgccatt	ctgttatg	tgtaccat	300
agatggct	cttcatt	ttcattat	gtgaactt	cgtctcat	gccatggc	360
atgaccac	tgtggaca	catagcct	tgccataa	tgttatgt	caggaa	420
gtcatgtg	ggtggtat	catacctt	tagtacct	caagctct	tggtcact	480
aaagattt	atattggc	tctatggc	caatgtca	agttattt	actgttaa	540
tgtttctt	ttagccat	tggaactc	tgcatgag	atagaaat	tgatcac	600
attttcag	cttaattt	tattcttt	tctggtag	ctaattgc	ccatgctg	660
tctatta	gtttgttg	tgcattct	agagagc	aaaaaact	cttcacgt	720
gtttcttg	tgatagt	ggttggtt	tgtgggtt	tatacttt	gtacttgc	780
ctcaaatt	gttccttt	ttttgata	aataaaat	cctccatg	ttcctctt	840
gtgattac	tgctttac	tttggtct	agtgtaa	acaaagg	taaaaaaa	900
gccttcta	gttttttt	gaagcagt	aaactttg	atttaatt	ggt	951

<210> 351

<211> 906

<212> DNA

<213> Unknown (H38g200 nucleotide)

<220>

<223> Synthetic construct

<400> 351

atgacgaact	tgaatgcac	acaggcca	caccgtaa	tcattctg	aggatccca	60
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ggaacgccag acaagaaccc atggttgccc tttcccctgg gatttctcta cacactcaca 120
ctcctgggaa atggtaccat cctagctgtc atcaaggtgg agccaagtct ccatgagccc 180
acgtattact tcctttctat cttggctctc actgacgtta gtctctccat gtccaccttg 240
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atgcagatgt tcttcatcca tgtatttggg atagtagaat caggagtcct agtggtccatg 360
gcctttgaca gatttgtggc catccgaaac ccattacact atgtttccat cctcactcac 420
gatgttatte gaaagactgg aatatctgtc ctaccccggg cagtctgtgt ggtattccct 480
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gcctccatga tccacagatt ttgggagcat ttatcaccag tagtgacat ggtcatggct 840
gatataacc tactgtctcc gcctgtgcta aacccattg tctacagtgt gaagaccaag 900
caaatt

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<210> 352

<211> 971

<212> DNA

<213> Unknown (H38g201 nucleotide)

<220>

<223> Synthetic construct

<400> 352

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gatccagaac tgcagccggt cctcgctttg ctgtccctgt cctgtccat gtatctgggtc 120
acagtgtgta ggaacctgct cagcatcccc gctgtcagct ctgactccca cctccacacc 180
cccacgtact tcttctctc catcctgtgc tgggctgaca tcggtttcac ctcgccacg 240
gttcccaaga tgattgtgga catgcagtgg tatagcagag tcattctctca tgcgggctgc 300
gtgacacaga tgtctttctt ggtccttttt gcatgtatag aaggcatgct cctgactgta 360
atggcctatg actgctttgt aggcattctat cgcctctgc actaccagt catcgtgaat 420
cctcatctct gtgtcttctt tgttttgggt tcttttttcc ttagcctgtt ggattcccag 480
ctgcacagtt ggattgtgtt acaattcacc atcatcaaga atgtggaaat ctctaatttt 540
gtctgtgacc cctctcaact tctcaaaact gcctcttatg acagcgtcat caatagcata 600
ttcatatatt tcgatagtac aatgtttggt tttcttctca tttcagggat cctttcatct 660
tactataaaa ttgtcccctc cattctaagg atgtcatcgt cagatgggaa gtataaaact 720
ttctccacct atggctctca cctagcattt gtttgctgat tttatggaac aggcattgac 780
atgtacctgg cttcagctat gtcaccaacc cccaggaatg gtgtgggtgt gtcagtgtg 840
taagctgtgg tcacccccat gctgaacctt ttcattctaca gcctgagaaa cagggacata 900
caaagtgcc tgcggagggt gcgcagcaga acagtcgaat ctcatgatct gttccatcct 960
ttttctgggtg t

```

<210> 353

<211> 431

<212> DNA

<213> Unknown (H38g202 nucleotide)

<220>

<223> Synthetic construct

<400> 353

```

ttctctgtta caggtatcag cgttgtggat tgctgtttct agtccacagt tattcctgaa 60
atgctcttca gttgccaggt acagcacttg gtccataacc caaaggggat actattatta 120
ttattattat tattattatt attattatta acattttttt aaaaatttct tttcatagaa 180
tgcatttttg tattagagat tctctagtgt ggaaaataac agtttattac ttatagttct 240
atatttgtgg acagatcggt ttagaacaag taaaacacat ttgagaatga agtctcagtt 300
tagaatttgt aatattttga tacttctaca agggggacct tgcccttaa cagaactttg 360
ctatactcag aagcattcca agcttttctt ctaggattt agaaattcat aatgtgagat 420
atcagcattt c

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<210> 354
 <211> 938
 <212> DNA
 <213> Unknown (H38g203 nucleotide)

<220>
 <223> Synthetic construct

<400> 354
 actcatggat acacttttag cttgaggctt tttctgcatt gccttaccta tgttttaggtt 60
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 atttataatt tactatttaa cttatcactt aaattgaatc cagatattca aaacactggc 180
 cattctttct actatgatgt ttttgtaatg ttttattcca ccttgactgt gatagtcccg 240
 tttgtaatac caagaggatc agatcatttt ttgttctaga aagataaaaa agttcctgaa 300
 agagtggaaa aatacacttt tgaacccgaa acaaagcttc attttctaag attttggcat 360
 aaaatatacc gtgtaccttt tgctcttaaa acacttcgtt gttataacat tcaattttta 420
 ggtacttatg agtggcaggc tatgggacta gttagtctct gtctagaatc tctctataaa 480
 cctcaagaa ataatatgta ttttaaaaaa atcttaccat tttttcagtg tacaatatac 540
 aatttcttac attgatccat ttattaactc attagtattt ttgtgggttt cactgctttt 600
 atacaagctt ttgcttttat gatcatcata gtttcttata cccaagtcct ctttgcccta 660
 ctgaaaaaga attctgagaa gggcagaagc aaaagcttcc tcatgtgcag tgcccacctg 720
 ctctctgtct ctttgttcta tagcagtgtc ttcttcatgt atgggtgccc cagggtctggc 780
 ccagattaac agtggaatga aatgtatttt ccgttctaca tgattataat tctctgcag 840
 actcctttat ttacagtatg aaaaacaaag aagtttttagg tacacttaga acaatgataa 900
 agaaatattt ttggagaaca ctttcataat tctttcca 938

<210> 355
 <211> 759
 <212> DNA
 <213> Unknown (H38g204 nucleotide)

<220>
 <223> Synthetic construct

<400> 355
 atgtgcttgt tcctgtgtca cctctccttc ttggacatga ccatttcttg tgctattgtc 60
 cccaagatgc tggtctggctt tctcttgggt agtaggatta tctccttttg gggctgtgta 120
 atccaactat tttctttcca tttcctgggc tgtactgagt gcttccttta cacactcatg 180
 gcttatgacc gtttcttgc catttgtaag cccttacact atgctaccat catgaccac 240
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 caaacaagtt ttgtattccg gctgcccttc tgtggcccca atcgggtcga ctacatcttc 360
 tgtgacattc ctgccatgct gcgtctagcc tgcgccgata cgcccatcaa cgagctgggtc 420
 acctttgcag acattggctt cctggccctc acctgcttca tgctcatcct cacttccat 480
 ggctatattg tagctgccat cctgcgaatt ccgtcagcag atgggcgcgc caatgccttc 540
 tccacttgtg ctgccacct cactgtttgtc attgtttact atgtgccctg caccttcatt 600
 tacctgcggc cttgttcaca ggagcccctg gatgggggtg tagctgtctt ttacactgtc 660
 atcactccct tgcttaactc catcatctac acactgtgca acaaagaaat gaaggcagca 720
 ttacagaggc tagggggcca caaggaagtg cagcctcac 759

<210> 356
 <211> 933
 <212> DNA
 <213> Unknown (H38g205 nucleotide)

<220>
 <223> Synthetic construct

<400> 356
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 ggcaacacca tcatcatcgc tctctcctgg ctagaccttc ggctgcacac acctatgtac 180

ttctttctct	ctcatctgtc	cctcctggac	ctctgcttca	ccaccagcac	cgtgccccag	240
ctcctgatca	accttttggg	ggtaggacgc	accatcaccc	gtggagggtg	tgtggctcag	300
ctcttcatct	acctagccct	gggctccaca	gagtgtgtgc	tcctgggtgg	gatggccttt	360
gaccgctatg	ctgctgtctg	tgttccactc	cactacatgg	ccatcatgca	ccccatctc	420
tgccagaccc	tggctatcgc	ctcctggggg	gcggttttcg	tgaactctct	gatccagaca	480
ggtctcgcga	tggccatgcc	tctctgtggc	catcgactga	atcacttctt	ctgtgagatg	540
cctgtatttc	tgaagttggc	ttgtgctggc	acagaaggaa	cagaggccaa	gatgtttgtg	600
gcccagtgca	tagtctgtgc	tgttcctgca	gcacttattc	taggtctcta	tgtgcacatt	660
gctcatgcag	tgttgagggt	gaagtcaacg	gctgggcgca	gaaaggcttt	tgggacttgt	720
gggtcccacc	tcctagtagt	tttccttttt	tatggctcag	ccatctacac	atatctccaa	780
tccatccaca	attattctga	gcgtgaggga	aaatttggtg	ccctttttta	tactafaatt	840
acccccattc	tcaatcctct	catttataca	ctaagaaaca	aggacgtgaa	gggggctctg	900
tggaaagtac	tatggagggg	cagggaactca	ggg			933

<210> 357

<211> 934

<212> DNA

<213> Unknown (H38g206 nucleotide)

<220>

<223> Synthetic construct

<400> 357

atgaagataa	agaatcacac	tccagtaact	gaggtccccc	tgatgggaat	ccctcataca	60
aaggggatgg	aaaatgtgct	ttttgtctta	tttctggcct	tctacctctt	caccttgctg	120
gggaacctac	tcattcttct	ggcctgcctc	actttctcca	acctccacac	ccccatgtat	180
ttcttcctgg	gaaacctgtc	tgtgtttgac	atatttttcc	cttcagttag	ttccccaaa	240
atgatgctct	gcttagtggg	acaaagctgc	accatctctt	tccaggggtg	tgccctccag	300
ctcttctttc	accatttctt	gggttgccac	gagtgtttcc	tgtacactgt	gatggcctat	360
gaccgatatt	cagccatctg	ccaccctttg	ccatacacgg	tcacatgaa	acgcagggtg	420
tgtgcectcc	tgacgttagg	cacctggacg	gggagctgtc	tgcatgcac	tgctctcaca	480
ctctcatctc	ttaagttatc	ctactgtggc	cccaatgaag	tggacaattt	ttttctgtga	540
tattccgggtg	gtgtgcctcc	tggcctgcgc	agacacctct	ctagcacgga	cagtgaagttt	600
catcaacgta	ggtgtgtgtg	cgctcatgtg	ttttcttctt	atcctcacct	cttatgcttg	660
cattgttatc	tctatactga	aaatcagttc	ctcagaaggt	aggcgagag	ccttctcaac	720
ctgcagtgcc	catctgacgt	ccatcctgct	cttctatgga	ccaatagtcc	tcatttatct	780
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cccttccctg	aatcctttga	tatatacttt	gagaaacaaa	ggtgtaaagc	tggcactgag	900
aaaggtgctc	attcaaggag	tacataattg	tgga			934

<210> 358

<211> 892

<212> DNA

<213> Unknown (H38g207 nucleotide)

<220>

<223> Synthetic construct

<400> 358

gtgcgtgggt	ccaagcagct	gcggaatggg	acctagtggt	cccagtttct	tctgaaaggc	60
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gtggttgtgg	ttgggagcca	catgttcaca	gtggactacc	gacgccacac	tcccatgtac	180
ttcttcttgg	gcggccactc	gctgatggat	gccgcctgta	tctccaacat	ggtgactcag	240
gtgctggtgc	atttgcctgg	tccggtaggg	cccgtacttt	attgtgcttg	tctcatccag	300
atatgctttc	tccacttctt	ggcaccctag	gagtccttcc	tcctcacage	cgtggcctat	360
gattctatgc	agctatctgc	cagccattgc	actactttgt	cctcgtgggc	cgactgaccc	420
acacgggcct	cacttccatc	tctgcctgc	tggccttggc	caacgcattc	acctacagca	480
tcttcacage	tctacccaag	ttctgcaggc	cttgccctat	cacccacttc	ttctgcgacc	540
tccgtcactg	ctcagactct	cttgcttcag	cacacgtacc	aatgaacttg	ccctgttctt	600
cagttttctg	gtggctcttg	cacactgcgt	cctggctcgt	gtctcctatg	gacacgttgt	660
ggctgctggt	caggattcat	tccaccacgg	gctgaagaaa	agccttttct	acctgtgttg	720

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cccatctcgc tatgatecgt cttttctacg tcacttcagt cccctgctac atccttccca 780
actctgcata ctctggcttg ggcgactggg tgctctctgt gctatgtgtg gtcctcacte 840
acatgctaaa ccccatcttc cccagcatgc tgggatgaca ggcatgagcc ac 892

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<210> 359

<211> 936

<212> DNA

<213> Unknown (H38g208 nucleotide)

<220>

<223> Synthetic construct

<400> 359

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atgggtgtaa aaaaccattc cacagtgact gagtttcttc tttcaggatt aactgaacaa 60
gcagagcttc agctgccccct cttctgcctc ttcttaggaa tttacacagt tactgtggtg 120
ggaaaacctca gcatgatctc aattattagg ctgaatcgtc aacttcatac ccccatgtac 180
tatttcctga gtagtttgct ttttttagat ttctgctatt cttctgtcat taccctaaa 240
atgctatcag ggtttttatg cagagataga tccatctcct attctggatg catgattcag 300
ctgttttttt tctgtgtttg tgttatttct gaatgctaca tgctggcagc catggcctgc 360
gatecgtacg tggccatctg cagcccaactg ctctacaggg tcatcatgtc ccctagggtc 420
tgttctctgc tgggtggtgc tgtcttctca gtaggtttca ctgatgctgt gatccatgga 480
ggttgtatac tcagggttgc tttctgtgga tcaaaccatca ttaaaccatta tttctgtgac 540
attgtccctc ttattaaact ctctgctcc agcacttata ttgatgagct ttgtattttt 600
gtcattggtg gatttaacat ggtggccaca agcctaacaa tcattatttc atatgctttt 660
atcctcacca gcactctgcg catccactct aaaaagggca ggtgcaaagc gtttagcacc 720
tgtagctccc acctgacagc tgttcttatg ttttatgggt ctctgatgtc catgtatctc 780
aaacctgctt ctagcagttc actcaccag gagaaagtat cctcagtatt ttataccact 840
gtgattctca tgttgaatcc cttgatatat agtctgagga acaatgaagt aagaaatgct 900
ctgatgaaac ttttaagaag aaaaatatct ttatct 936

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<210> 360

<211> 753

<212> DNA

<213> Unknown (H38g209 nucleotide)

<220>

<223> Synthetic construct

<400> 360

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atgtactatt tcctcagcca cctggccttt gttgaccttt gttactctc tgctattaca 60
ccgaagatga tgggtgaattt tgttggtgaa cgcaacacca ttccctttcca tgcttggtgca 120
acccaactgg gttgttttct caccttcagt atcactgagt gtttccctct agcctccatg 180
gcctacgatt gctatgtcgc catctgtagt cccctgcatt attcaacact gatgtcaaga 240
agagtctgca ttcaactggg ggcagttcca tataatataca gcttccctggg tgccctcttc 300
cacaccgtta tcactttccg tctgacttac tgtggcccaa acttaattaa ccatttctat 360
tgtgatgacc tccccttctt agctctgtcc tgctcagaca cacacatgaa ggaaattctg 420
atatttgctt ttgctggctt tgatatgac tcttctctt ccattgtcct cactcctac 480
atctttatta ttgccgctat cctaaggatc cgctctactc aggggcaaca caaagccatt 540
tccacctgtg gctcccatat ggtgactgtc actattttct atggcacact gatctttatg 600
tacctacagc ccaaatacaa tcaactcctg gacacagaca agatggcttc tgtattttac 660
acagtgggtg tccccatgtt aaaccccta atctatagtc taaggaacaa agaagtgaag 720
gatgcctcaa agaaagcctt ggataaaggt tgt 753

```

<210> 361

<211> 933

<212> DNA

<213> Unknown (H38g210 nucleotide)

<220>

<223> Synthetic construct

<400> 361

atgtccaacg	ccaccctact	gacagcgttc	atcctcaagg	gccttcccc	tgccccaggg	60
ctggacgccc	ccctcttttg	aatcttctctg	gtggtttacg	tgctcactgt	gctggggaac	120
ctcctcatcc	tgctgggtgat	cagggtggat	tctcacctcc	acacccccat	gtactacttc	180
ctcaccaacc	tgctcttcat	tgacatgtgg	ttctccactg	tcacgggtgcc	caaaatgctg	240
atgaccttgg	tgctcccaag	cggcaggact	atctccttcc	acagctgcgt	ggctcagctc	300
tattttttcc	acttcctggg	gagcaccgag	tgtttctctt	acacagtcac	gtcctatgat	360
cgtacactgg	ccatcagtta	cccgtcagg	tacaccaaca	tgatgactgg	gcgctcgtgt	420
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gtctgttcca	tcttgccgat	ccgcacctca	gaggggaggc	acagagcctt	tcagacctgt	720
gcctcccact	gtatcgtggg	cctttgcttc	tttggccctg	gtcttttcat	ttacctgagg	780
ccaggctcca	gggacgcctt	gcattggggt	gtggccggtt	tctacaccac	gctgactcct	840
cctttcaacc	ctgttggtga	cacctgaga	aacaaggagg	taaagaaagc	tctgttgaa	900
ctgaaaaatg	ggtcagtatt	tgctcagggt	gaa			933

<210> 362

<211> 827

<212> DNA

<213> Unknown (H38g211 nucleotide)

<220>

<223> Synthetic construct

<400> 362

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ctgggcatga	cagatctgat	ctgccaatct	gcaccagctc	tgccctccac	acccccatgt	120
gcttctctct	gagcgtattc	tcttctctag	acatctgcag	ttcctccatg	tgcaccccag	180
gctgctgac	cacttttctca	ccactaacca	tccatctcct	ttgcagggtg	tataatccag	240
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gactgagttg	tggccatttg	ccacccttcc	ccctagcata	tcatcatgtc	caaggggact	360
gtgtgcccag	ctgggtgggtg	ttacctctgc	tgtgggggtg	ctcatttcag	ctctagacag	420
gatgcattca	tctgcacctca	ccgtggccta	acatcattga	tcattactat	gttctgttac	480
attccccacc	cccatgctcc	aactggcctg	ctcagatgcc	actgtggcca	acatgatcct	540
gtttgtctct	tctgccttga	tcactatccc	tacctatcca	gtcatcttgg	tctcttacac	600
ttacatcctg	gttaatcagt	gggatgaggt	ccctggatgc	ccagtgcata	gctttctcca	660
ctcgtgcctc	ccacctcact	gctcactgcc	tgttttatgg	gtttgtgttc	cttgatata	720
ttccacccaa	ccctgaaatg	gcctcagcct	ataacaaaat	cctcttcacc	gttgtgatcc	780
ccatgctgaa	cctcctggtc	taaggcctga	gaaataaaga	tgtcaaa		827

<210> 363

<211> 937

<212> DNA

<213> Unknown (H38g212 nucleotide)

<220>

<223> Synthetic construct

<400> 363

tcagtggcca	aaggcaatca	ttcaacagtg	tatgaattta	tctcttggg	gctcacagat	60
aatgcagagc	ttcaagtcac	tctcttttgg	atattccttg	tagtatactt	agctagcttt	120
atgggtaatt	tgggtttgat	tatgctaatt	caaatacagtc	ctcagcttca	tacacccatg	180
tattttttcc	tcagccatct	ggcttttgtt	gatttttctt	ttacttcac	tggtgcccc	240
aataccttgg	taaattttct	gtgtgaagtt	aaaagtataa	cattttatgc	atgtgccatt	300
caggtatgct	gcttcatcac	attttagatt	tgtgaattat	atttgcctc	aatcatggca	360
tatgatccgt	atgttgccat	ctgtaaccct	ttactttatg	tcattctcat	tcctagaaaa	420
ctgtattaaa	ctgattgcta	gcacgtatgt	gtatggattc	actgtgggac	ttgtacagac	480
agtggcgaca	tctacttgt	ccttttgtga	ttccaacgtg	atcaaccact	tctaccatga	540
tgatgttcca	ttagtggctc	tggcctgttc	tgacactcat	gtcaaagagc	tgatgttgtt	600

aatcattgct	gggttcaata	ctctctgctc	tctagtaatt	gtgctgattt	cttatggttt	660
cattttcttt	gccatcctga	ggatacatte	tgctgaagg	agacagaaag	cattttctac	720
cagtgtcttc	catctgacct	ccatcacaa	atcttatgga	acaatcattt	ttatgtaccc	780
gcagcccaag	tcaagccatt	ccctgaatat	ggataaagtt	gcttctgtgt	ttaatgtggt	840
agtgattcct	acattaaacc	cactgatcta	tagtttaaga	aatcaggagg	taaaaaatgc	900
actaaagaga	attatagaaa	agttatgttt	ggctgtc			937

<210> 364

<211> 697

<212> DNA

<213> Unknown (H38g213 nucleotide)

<220>

<223> Synthetic construct

<400> 364

tctggtttgg	tccccaaaag	tttccctggc	tgtctcacc	aattattctt	tctgcactat	60
agctttgtgt	tggactcagc	tatactgctg	gccatggcat	ttgaccgcta	tatggccatt	120
tgtcacccct	tcgagataca	ctactattct	gactcccaaa	accattgtca	aaattgctgt	180
gggaatatgt	ttccgaagtt	tctgtgtttt	tgtcccatgt	gttttccttg	tgaatcgttt	240
acccttctgc	aggacacata	tcatttctca	cacatactgt	gagcacatag	gtgttgccca	300
gcttgccctg	gctgatatct	ccatcaatat	ctgggtgtgga	ttttgtgttc	ccatcatgac	360
ggtgatgaca	gacgtgatcc	tcattgctgt	ctcctacacc	ctcatcctct	gtgctgtcct	420
ttgcctcccc	tcccaagatg	cccgtcagaa	ggccctttgc	tcctgtgggt	cccattgtctg	480
tgttatcctc	atattctata	taccagcatt	cttctccatt	cttgcccat	gctttgggca	540
taatgtccct	catacctttc	atattatggt	tgccaacctt	tatgtaatca	ttccacctgc	600
tctcaactct	attgtctaca	gaataaagac	caagcaaate	cagaacagaa	tccttttgc	660
ctttcccaag	gggtcccagt	gataggtgcc	tgagctc			697

<210> 365

<211> 930

<212> DNA

<213> Unknown (H38g214 nucleotide)

<220>

<223> Synthetic construct

<400> 365

atgtccaacg	ccagcctact	gacagcgctt	atcctcatgg	gccttcccca	tgccccagcg	60
ctggagcccc	ccctcttttg	agtcttctcg	gtggtttacg	tgctcactgt	gctggggaac	120
ctcctcatcc	tgtcgggtgat	caggggtggat	tctcacctcc	acaccaccat	gtactacttc	180
ctcaccaacc	tgtcgttcat	tgacatgtgg	ttctccactg	tcacggtgcc	caaattgctg	240
atgacttttg	tgttcccaag	tggcagggct	atctccttcc	acagctgcat	ggctcagctc	300
tattttcttt	acttcctagg	gggcaccgag	tgtttcctct	acagggtc	gtcctgtgat	360
cgctacctgg	ccatcagtta	cccgtcagg	tacaccagca	tgatgactgg	gcgctcgtgt	420
actcttcttg	ccaccagcac	ttggctcagt	ggctctctgc	actctgctgt	ccaggccata	480
ttgactttcc	atttgcccta	ctgtggaccc	aactggatcc	agcactat	gtgtgatgca	540
ccgcccatec	tgaactggc	ctgtgcagac	acctcagcca	tagagactgt	catttttgtg	600
actgttgga	tagtggcctc	gggtgtcttt	gtcctgatag	tgctgtccta	tgtgtccatc	660
gtctgttcca	tctgcggat	ccgcacctca	gaggggaagc	acagagcctt	tcagacctgt	720
gcctcccaact	gtatcgtgg	cctttgtctc	tttggccctg	gtcttttcat	ttacctgagg	780
ccaggctcca	ggaaagctgt	ggatggagtt	gtggccgttt	tctacactgt	gctgacgcc	840
cttctcaacc	ctgttgtgta	cacctgagg	aacaaggagg	tgaagaaagc	tctgttgaag	900
ctgaaagaca	aagtagcaca	ttctcagagc				930

<210> 366

<211> 933

<212> DNA

<213> Unknown (H38g215 nucleotide)

<220>

<223> Synthetic construct

<400> 366

atgagaagaa	actgcacgtt	ggtgactgag	ttcattctcc	tgggactgac	cagtcgccgg	60
gaattacaaa	ttctcctctt	cacgctgttt	ctggccattt	acatggtcac	ggtggcaggg	120
aaccttggca	tgattgtcct	catccaggcc	aacgcctggc	tccacatgcc	catgtacttt	180
ttcctgagcc	acttatacct	cgtggatctg	tgcttctctt	ccaatgtgac	tccaaagatg	240
ctggagattt	tcctttcaga	gaagaaaagc	atttcctatc	ctgcctgtct	tgtgcagtgt	300
taccttttta	tcgccttggt	ccatgttgag	atctacatcc	tggctgtgat	ggcctttgac	360
cggtacatgg	ccatctgcaa	ccctctgctt	tatggcagca	gaatgtccaa	gagtgtgtgc	420
tccttctca	tcacgggtgc	ttatgtgtat	ggagcgtca	ctggcctgat	ggagaccatg	480
tggacctaca	acctagcctt	ctgtggcccc	aatgaaatta	atcacttcta	ctgtgcggac	540
ccaccactga	ttaagctggc	ttgttctgac	acctacaaca	aggagtgtgc	aatgtttatt	600
gtggctggct	ggaacctttc	tttttctctc	ttcatcatat	gtatttccta	cctttacatt	660
ttccctgcta	ttttaagat	tcgctctaca	gagggcaggc	aaaaagcttt	ttctacctgt	720
ggctcccatc	tgacagctgt	cactatatcc	tatgcaacct	ttttcttcat	gtatctcaga	780
ccccctcaa	aggaatctgt	tgaacagggt	aaaatggtag	ctgtatttta	taccacagta	840
atccctatgc	tgaaccttat	aattttatagc	cttagaaaata	aaaatgtaaa	agaagcatta	900
atcaaagagc	tgtcaatgaa	gatatacttt	tct			933

<210> 367

<211> 945

<212> DNA

<213> Unknown (H38g216 nucleotide)

<220>

<223> Synthetic construct

<400> 367

atgctgctat	ccaacattac	tcagtttagc	cccatattct	atctcaccag	ctttcctgga	60
ttggaaggca	tcaaactctg	gattttcctc	ccctttttct	ttatgtacat	ggttgccatc	120
tcaggcaatt	gtttcattct	gatcattatt	aagaccaacc	ctcgtctgca	cacacccatg	180
tactatctac	tatccttgct	ggccctcact	gacctggggc	tgtgtgtgtc	cacgttgccc	240
accactatgg	ggatcttctg	gtttaactcc	cagagtatct	actttggagc	gtgtcaaata	300
cagatgttct	gcatccactc	tttttctctc	atggagtctt	cagtgtcctt	catgatgtcc	360
tttgaccgct	ttgtggccat	ctgccacctt	ctgaggtatt	cggtcattat	cactggccag	420
caagtggcca	gagcaggcct	aattgtcctc	ttccggggac	ctgtggccac	tatccctatt	480
gtcctcctcc	tgaaggcttt	tccctactgt	ggatctgtgg	tccctctcca	ctcattttgc	540
ctgcaccagg	aagtgtatca	gctggcctgc	acagatacca	ccttcaataa	tctgtatgga	600
ctgatgtgtg	tagttttcac	tgtgatgtct	gacctgggtc	tcacgcactc	gtcctatgga	660
ctcatctctg	acacagtagc	aggcctggcc	tcccaagagg	agcagcgccg	tgcctttcag	720
acatgcaccg	ctcatctctg	tgtgtgtgta	gtattctttg	tgcccatgat	ggggctgtcc	780
ctgggtgcacc	gttttgggaa	gcatgcccc	cctgtctatt	atcttcttat	ggccaatgtc	840
tacctttttg	tgccctccat	gcttaaccca	atcatataca	gcattaagac	caaggagatc	900
caccgtgcca	ttatcaaact	cctaggtctt	aaaaaggcca	gtaaa		945

<210> 368

<211> 969

<212> DNA

<213> Unknown (H38g217 nucleotide)

<220>

<223> Synthetic construct

<400> 368

atgaaccctg	aaaactggac	tcaggtaaca	agctttgtcc	ttctgggttt	ccccagtagc	60
cacctcatac	agttcctggg	gttccctggg	ttaatgggtg	cctacattgt	aacagccaca	120
ggcaagctgc	taattattgt	gctcagctgg	atagaccaac	gcctgcacat	acagatgtac	180
ttcttctctg	ggaattttct	cttccctggg	ctgttgctgg	taactgttgt	ggttcccaag	240
atgcttgtcg	tcactctcac	gggggatcac	accatctcat	ttgtcagctg	catcatccag	300
tcctacctct	acttctttct	aggcaccact	gacttcttcc	tcttggccgt	catgtctctg	360

gacggttacc	tggcaatctg	ccgaccactc	cgctatgaga	ccctgatgaa	tggccatgtc	420
tggtcccaac	tagtgctggc	ctcctggcta	gctggattcc	tctgggtcct	ttgccccact	480
gtcctcatgg	ccagcctgcc	tttctgtggc	cccaatggta	ttgaccactt	ctttcgtgac	540
agttggccct	tgctcaggct	ttcttgtggg	gacaccacc	tgctgaaact	ggtggcttcc	600
atgctctcta	cgttggtgtt	actgggctca	ctggctctga	cctcagtttc	ctatgccttc	660
attcttgcca	ctgttctcag	ggccccata	gctgctgagc	gaaggaaagc	gttttccact	720
tgcgcctcgc	atcttacagt	ggtggctcgc	atctatggca	gttccatctt	tctctacatt	780
cgatgtgcag	aggctcagtc	caaactgctc	aacaaagggt	cctccgtcct	gagctgcac	840
atcacacccc	tcttgaaccc	attcatcttc	actctccgca	atgacaaggt	gcagcaagca	900
ctgagagaag	ccttgggggtg	gcccaggctc	actgctgtga	tgaaactgag	ggtcacaagt	960
caaaggaaa						969

<210> 369

<211> 1016

<212> DNA

<213> Unknown (H38g218 nucleotide)

<220>

<223> Synthetic construct

<400> 369

atgatgggag	aagcaaggaa	caggacagta	gtccaggaa	ttatcctgga	gggatttcc	60
gctgtccagc	atctggggaa	tgtccttttc	ctgggtgcacc	tgctggcata	cctggcctcc	120
atcatggcaa	acatgctcat	aatcaccatc	acctgggctg	accatcacct	ccagacacct	180
atgtatttct	tcctcaacag	tttttccttc	tgatgaatgt	gttttatcac	cacagttatt	240
cctaaacttc	tggtcatctt	tcttcaggc	aggcaaataa	tcccttttac	tactgtcttc	300
atgcagtcct	tttcattttt	atttcttggg	tcaacagtgt	tcttccttat	ggctgtgatg	360
tccttggatt	gatacctggc	catttgcaag	cctctgcatt	actccaccat	catgagcctg	420
aggactagct	tccacctggg	caactgtctg	tttgcgtgg	gcttcaactc	catcactggg	480
ctcatgggtg	aggtttccca	gttatctttc	tgtggacccc	atgtcatccc	tcacttcttc	540
cgtgacctcg	gcctctgat	ccaactctcc	tgttctgaca	ccagatctac	tgaaacgttg	600
gcctttgtcc	ttgtttcatt	cgttcttttt	acatccctca	ttataaccat	cattgcatat	660
ggcacaactg	tagtcacatt	tgtaagactc	ccatcagcca	aggagcggca	gaaagcttcc	720
tccacctgct	cctctcacct	cattgtcttc	tctctggtgt	atggcagctg	tgtcttcata	780
tatgtgaagc	cgaagcaaat	ggacaggctg	gactccaaca	gaatggctgc	tcttgtgaac	840
acagtgggtg	ccccactgct	gaacccgac	atttacactc	tgcggaacaa	gcaggtccac	900
caggctctga	gggatgctca	gtccagaatg	aaattgtaaa	aacagaatca	caacctccca	960
gtgaaggaat	gcaccttctc	cttgatctaa	tccaatcttt	ctcctgtttc	tggaa	1016

<210> 370

<211> 927

<212> DNA

<213> Unknown (H38g219 nucleotide)

<220>

<223> Synthetic construct

<400> 370

atggccagta	caagtaatgt	gactgagttg	attttcaactg	gccttttcca	ggatccagct	60
gtgcagagtg	tatgctttgt	ggtgtttctc	cccgtgtacc	tgccacgggt	ggtgggcaat	120
ggcctcatcg	ttctgacggg	cagtatcagc	aagagtctgg	attctcccat	gtacttcttc	180
cttagctgcc	tgctcttggg	ggagatcagt	tattcctcca	ctatcgcccc	taaattcacc	240
atagacttac	ttgccaagat	taaaaccatc	tctctggaag	gctgtctgac	tcagatattc	300
ttcttccact	tcttgggggt	tgctgagatc	cttttgattg	tgggtgatgg	ctatgattgc	360
tacgtggcca	tttgcaagcc	tcttcattat	atgaacatta	tcagtctgca	actgtgtcac	420
cttctggttg	ctggttctctg	gctggggggc	ttttgtcact	ccataattca	gattctcggt	480
atcatccaat	tgcccttctg	tggtcccaat	gtgattgacc	actatttctg	tgacctccag	540
cctttattca	agcttgccctg	cactgacacc	ttcatggagg	gggttattgt	gttggccaac	600
agtggattat	tctctgtctt	ctccttcttc	atcttgggtg	cctcttatat	tgctattctg	660
gtcaacttga	ggaaccattc	tgcagagggg	aggcacaag	ccctctccac	ctgtgcttct	720
catatcacag	tgtcatctt	gttttttggg	cctgctatct	tcctctacat	gcgaccttct	780

tccacttttca ctgaagataa acttgtggct gtattctaca cggtcacac ccccatgctg	840
aaccccatca ttacacact caggaatgca gaggtgaaaa tcgccataag aagattgtgg	900
agcaaaaagg agaatccagg gagggag	927

<210> 371

<211> 965

<212> DNA

<213> Unknown (H38g220 nucleotide)

<220>

<223> Synthetic construct

<400> 371

atggcaaaag gcaatcattc atcagtgact gagttcatcc tcctagggct cacagataat	60
caggaacttc aagtcattct ctttggtgta ttcctactga ttacttagt tactgtgttg	120
ggtaatcttg gtttgattgt gctaattccat atcagtcctc agcttcacac acctatgtat	180
tttttctca gccatctggc ttttggtgat ttttacggta cctctgctat cactccaaac	240
acccttgta actctttgca tgaaattaaa agcatgtcat tttatgcatg tgccactcaa	300
gtgtgctgct tcattacact ttcagtcctgg gaattattgt tgctctcatg gcatatgatc	360
ggtagttgc catctgcaac cctttactct atgtagttct catgcctagg agactctgca	420
ttcaaatggc cactggctta tatatttatg gtttcacat gggactcata caagcagtgg	480
ccacattcca catgtcgttt tgtgactcta atgtgggcaa ccagttctac tgtgatgatg	540
ttcctctgat tgctctggct tgttctgata cacaagtcaa ggaattgatg ttgttcatca	600
ttgtgcgtt caatgttttt tgttctctta tcattgttct catctcctat gtattcatcg	660
tctttgctat ctaaggatcc actctgccgt aggaagacag aaagcctttt ctacctgtgc	720
ttctcacatg ttttctattt ccatatatta tgggacctc agttttatgt acctacagcc	780
taagtcaagc cactcactag ataaagacaa atttgccctca gtattctatg cagtgggtgat	840
tcccatgcta aaccattga tctatagctt gaggaatcaa gaggtaaaaa aatgctatga	900
aaaaaattat tgaaaaaatg tgttctagta atcaacagta aaatttggtg gtactaaaag	960
aaata	965

<210> 372

<211> 951

<212> DNA

<213> Unknown (H38g221 nucleotide)

<220>

<223> Synthetic construct

<400> 372

atgtcccagg tgactaacac cacacaagaa ggcattctact tcatectcac ggacatccct	60
ggatttgagg cctccacat ctggatctcc atccccgtct gctgtctcta caccatctcc	120
atcatgggca ataccacat cctcactgtc attcgacag agccatctgt ccaccagcgc	180
atgtatctgt ttctctccat gctggcctg acggacctgg gtctcaccct caccacccta	240
cccacagtca tgcagcttct ctggttcaac gttcgtagaa tcagctctga ggctgtttt	300
gctcagtttt tcttcttca tggattctcc tttatggagt cttctgtcct cctggctatg	360
tccgttgact gctatgtggc catctgctgt cccctccatt atgcctccat cctaccaat	420
gaagtcattg gtagaactgg gtagccatc atttgcctgt gtgttctggc ggttcttccc	480
tcccttttct tactcaagc actgccttcc tgccactccc accttctctc tcgctcctat	540
tgccctcacc aggatatgat ccgcctggc tgtgctgaca tcaggctcaa cagctggat	600
ggatttgctc ttgccttgct cattattatc gtggatcctc tgctcattgt gatctcctat	660
acacttatcc tgaaaaatat cttgggcaca gccacctggg ctgagcgact ccgtgccctc	720
aataactgcc tgtccacat tctagctgtc ctggtcctct acattcccat ggttggtgta	780
tctatgactc atcgctttgc caagcatgcc tctccactgg tccatgttat catggccaat	840
atctacctgc tggcaccctc ggtgatgaac cccatcattt acagtgtaaa gaacaagcag	900
atccaatggg gaatgttaa tttccttcc ctcaaaaata tgcattcaag a	951

<210> 373

<211> 945

<212> DNA

<213> Unknown (H38g222 nucleotide)

<220>

<223> Synthetic construct

<400> 373

atgaatccag	caaatcattc	ccaggtggca	ggatttggtc	tactggggct	ctctcaggtt	60
tgggagcttc	ggtttgttt	cttcactgtt	ttctctgctg	tgtattttat	gactgtagtg	120
ggaaaccttc	ttatttggtt	catagtgacc	tccgaccac	acctgcacac	aaccatgtat	180
tttctcttgg	gcaatcttcc	tttcctggac	ttttgctact	cttccatcac	agcacctagg	240
atgctgggtg	acttgctctc	aggcaaccct	accatttcct	ttggtggatg	cctgactcaa	300
ctcttcttct	tccacttcat	tggaggcatc	aagatcttcc	tgctgactgt	catggcgtat	360
gaccgctaca	ttgccatttc	ccagcccctg	cactacacgc	tcattatgaa	tcagactgtc	420
tgtgcactcc	ttatggcagc	ctcctgggtg	gggggcttca	tccactccat	agtacagatt	480
gcattgacta	tccagctgcc	attctgtggg	cctgacaagc	tggacaactt	ttatttgtat	540
gtgcctcagc	tgatcaaatt	ggcctgcaca	gatacctttg	tcttagagct	tttaatgggtg	600
tctaacaatg	gcctgggtgac	cctgatgtgt	tttctgggtg	ttctgggatc	gtacacagca	660
ctgctagtca	tgctccgaag	ccactcacgg	gagggccgca	gcaaggccct	gtctacctgt	720
gcctctcaca	ttgctgtggg	gaccttaate	tttgtgcctt	gcactctacgt	ctatacaagg	780
ccttttcgga	cattccccat	ggacaaggcc	gtctctgtgc	tatacacaat	tgtaaccccc	840
atgctgaatc	ctgccatcta	taccttgaga	aacaaggaag	tgatcatggc	catgaagaag	900
ctgtggagga	ggaaaaagga	ccctattggt	ccccctggagc	acaga		945

<210> 374

<211> 960

<212> DNA

<213> Unknown (H38g223 nucleotide)

<220>

<223> Synthetic construct

<400> 374

atgtcatttc	taaattggcac	cagcctaact	ccagcttcat	tcatacctaaa	tggcatccct	60
ggtttggaag	atgtgcattt	gtggatctcc	ttcccactgt	gtaccatgta	cagcattgct	120
attacaggga	acttcggcct	tatgtacctc	atctactgtg	atgaggcctt	acacagacct	180
atgtatgtct	tccttgcctt	tctttccttc	acagatgtgc	tcattgtgcac	cagcaccctt	240
cccaacactc	tcttcatatt	gtggtttaat	ctcaaggaga	ttgattttaa	agcctgcctc	300
gcccagatgt	tcttttgtca	caccttcaca	gggatggagt	ctgggggtgct	catgctcatg	360
gccctggacc	actgtgtggc	catctgcttc	cctctgcgtt	atgccaccat	cctcactaat	420
tcagtcaattg	ctaaagctgg	gttctcact	tttcttaggg	gtgtgatgct	tggtatccct	480
tccactttcc	tcaccaagcg	ccttccatac	tgcaagggca	acgtcatacc	ccacacctac	540
tgtgaccaca	tgtctgtggc	caagatatct	tgtggtaatg	tcagggttaa	cgccatctat	600
ggtttgatag	ttgccctgct	gattgggggc	tttgatatcc	tgtgcattac	aatctcctac	660
actatgattc	ttcaagcagt	tgtgagtcta	tcatacagcag	atgctcgaca	gaaggccttc	720
agcacctgca	ctgcccactt	ctgtgccata	gtectcacct	atgttccagc	cttctttacc	780
ttctttacac	accatttttg	gggacacacc	attcctctac	acatacatat	tattatggct	840
aatctctacc	tactaatgcc	tcccacaatg	aacctatttg	tgtatggggg	gaaaaccagg	900
caggtaacgag	aaagtgtcat	taggttcttt	cttaagggaa	aggacaattc	tcataacttt	960

<210> 375

<211> 915

<212> DNA

<213> Unknown (H38g224 nucleotide)

<220>

<223> Synthetic construct

<400> 375

atggttgcta	caaacaatgt	gactgaaata	attttcgtgg	gattttccca	gaattggagt	60
gagcagaggg	tcattttctgt	gatgtttctc	ctcatgtaca	cagctgttgt	gctgggcaat	120
ggcctcattg	tggtgaccat	cctggccagc	aaagtgtctc	cctcccccat	gtattttctt	180
ctcagctact	tatcctttgt	ggagatctgc	tactgttctg	tcattggccc	caagcttacc	240

tttgactcct	ttatcaagag	gaaagtcatt	tctctcaagg	gctgcctcac	acagatgttt	300
tccctccatt	tctttggtgg	caactgagggc	tttctcctga	tggatgatggc	ctatgaccgc	360
tatgtggcca	tctgcaagcc	cttgcactac	atggccatca	tgaacagagc	aatgtgtggt	420
ctcctcgtga	ggatagcatg	gggcgggggc	ctgctgcatt	ctgttgggca	aaccttcctg	480
atcttccagc	tcccgttctg	tggccccaac	atcatggacc	actacttctg	tgatgtccac	540
ccagtgcctg	agctggcctg	cgcagacacc	ttcttcatta	gcctgctgat	catcaccaat	600
ggcggctcca	tctccgtagt	cagtttcttc	gtgctgatgg	cttcctacct	gatcatcctg	660
cacttctcga	gaagccacaa	cttggagggg	cagcacaagg	ccctctccac	ctgtgcctct	720
catgtcacag	ttgtcgacct	gttcttcata	ccttgctcct	tggctctatat	taggcctgtg	780
gtcacccctc	ctgcagacaa	gatagttgct	gtattttata	cagtgggtcac	acctctctta	840
aacctgtgta	tttactcctt	caggaatgct	gaagtgaana	atgccatgag	gagattttatt	900
gggggaaaag	taatt					915

<210> 376

<211> 939

<212> DNA

<213> Unknown (H38g225 nucleotide)

<220>

<223> Synthetic construct

<400> 376

atggctcctg	aaaatttcac	cagggtcact	gagtttatct	ttacaggtgt	ctctagctgt	60
ccagagctcc	agattccctt	cttcctgggc	tttctgggtc	tctatgggct	gaccatggca	120
gggaacctgg	gcacatcac	cctcaccagt	gttgactctc	gacttcaaac	ccccatgtac	180
tttttctcgc	aacatctggc	tctcattaat	cttggttaact	ctactgtcat	tgtccctaaa	240
atgctgatta	acttttttagt	aaagaagaaa	actacctcat	tctatgaatg	tgtccaccaa	300
ctgggagggt	tcttgttctt	tattgtatcg	gaggtaatca	tgtgtggctt	gatggcctgt	360
gaccgctatg	tggctatttg	taaccctctg	ctgtacatgg	tgggtggtgtc	tggcggtctc	420
tgcctcctgc	tggctccctt	cacatacctc	tatggctttt	ctacagctat	tgtggtttca	480
tcttatgtat	tctctgtgtc	ttattgctct	tctaataata	tcaatcattt	ttactgtgat	540
aatgttcttc	tgttagcatt	atcttgtctc	gatacttact	taccagaaac	agttgtcttt	600
atatctgcag	caacaaatgt	ggttggttcc	ttgattatag	ttctagtatc	ttatttcaat	660
attgttttgt	ctatttttaa	aatatgttca	tcagaaggaa	ggaaaaaagc	cttttctacc	720
tgtgcttcac	atatgatggc	agtcacaatt	ttttatggga	cattgctatt	catgtatgtg	780
cagccccgaa	gtaaccattc	actggatact	gatgataaga	tggcttctgt	gttttacacg	840
ttggtaatc	ctatgctgaa	tcccttgatc	tacagcctga	ggaataagga	tgtgaagact	900
gctctacaga	gattcatgac	aaatctgtgc	tattccttt			939

<210> 377

<211> 979

<212> DNA

<213> Unknown (H38g226 nucleotide)

<220>

<223> Synthetic construct

<400> 377

atgaaaattt	ctaataactc	tttgggggtt	ttacctacga	cattcatttt	ggttggcatc	60
ccagggtctg	agtcagagca	cctctggata	tccgtccctt	tctctctgat	atacatcatc	120
attttccttg	ggaatggcat	cattcttcac	gtcatcagaa	cagatattgc	cctacatcaa	180
cccatgtacc	tcttccttgc	catgttggca	ctggccgagg	tctgtgtctc	tgcateccac	240
ctgcctacag	tgttaggcat	attccttttt	ggaaatactg	aaattagtct	tgaagcttat	300
ctttttccag	atgttctcca	tccattcttt	atccatgatg	gagtcagctg	tgtgtctggc	360
catgtctttg	gaccgcttta	tagccatcta	cagcccactg	agctatacag	ctatcctgac	420
actgcccagg	gtctttggca	caggagctat	tatcgtactg	aaaagcatta	tgtcatgggc	480
tccgttgccc	attctcttat	ggcgtctgcc	cttctgtggc	cacaatgccc	tctcacattc	540
ctattgtctg	caccccaatc	ttatctatct	atcttgtggg	aacatttctg	ttaacaatat	600
ctatgggatt	ttcattgtta	cctctacttt	tgggctggat	tctgtgtgta	ttgtgatctc	660
ctatgggctc	atactccaca	ccgtgttggg	tattgccaact	ggagaagggc	ggaagaaggc	720
actcaacacg	tgtggctcac	acgtctgtgc	tgtgcttgct	tactatgtgc	ctatgattgg	780

cttgtctata	gtgcaccgcc	ttggacatcg	tgtgtccccct	ctgctgcaag	ccatgatggc	840
caatgcctac	ctcttcttcc	cacctgttgt	caatcctatt	gtctacagca	ttaagaccaa	900
ggagatccat	ggtgccattg	tccgaatgct	attagagaaa	agacgcagag	tgtagccaaa	960
aaccatagta	ggaagaaat					979

<210> 378

<211> 933

<212> DNA

<213> Unknown (H38g227 nucleotide)

<220>

<223> Synthetic construct

<400> 378

atgtccaaga	ccagcctcgt	gacagcggtc	atcctcacgg	gccttcccca	tgtccccaggg	60
ctggagcccc	cactcttttg	aatcttcctg	gtgggtttacg	tgctcactgt	gctgggggaac	120
ctcctcatcc	tgtcgtgat	cagggtggat	tctcacctcc	acacccccat	gtactacttc	180
ctcaccaacc	tgtccttcat	tgacatgtgg	ttctccactg	tcacgggtgcc	caaaatgctg	240
atgaccttgg	tgtccccaag	cggcagggct	atctccttcc	acagctgcgt	ggctcagctc	300
tattttttcc	acttcttggg	gagcaccgag	tgtttcctct	acacagtcac	gtcctatgat	360
cgctacttgg	ccatcagtta	cccgtcagg	tacaccagca	tgatgagtgg	gagcagatgt	420
gcctcctcgt	ccaccagcac	ttggctcagt	ggctctctgc	actctgctgt	ccagaccata	480
ttgactttcc	atttgcccta	ctgtggaccc	aaccagatcc	agcactatct	gtgtgatgca	540
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gacattgggc	tagtggcctc	gggctgcttt	ctcctgatag	tgctgtctta	tgtgtccatc	660
gtctgttcca	tcctgcggat	ccacacctca	gaggggaggg	acagagcctt	tcagacctgt	720
gcctcccact	gcacgtggg	cctttgcttt	ttgtttccct	gtgttttcat	ttacctgaga	780
ccaggctcca	gggacgtcgt	ggatggagtt	gtggccattt	tctacactgt	gctgacaccc	840
cttctcaacc	ctgttgtgta	cacctgaga	aacaaggagg	tgaagaaagc	tgtgttgaaa	900
ctgagagaca	aagtagcaca	ttctcagggg	gaa			933

<210> 379

<211> 936

<212> DNA

<213> Unknown (H38g228 nucleotide)

<220>

<223> Synthetic construct

<400> 379

atgccttcta	tcaatgacac	ccactttctat	cccccttct	tcctcctgct	aggaataacca	60
ggactggaca	ctttacatat	ctggatttct	ttcccattct	gtatttgtga	cctgattgcc	120
atttgtggga	atatgaccat	tctctttgtg	atcaaaactg	aacatagtct	acaccagccc	180
atgttctact	tcctggccat	gttgtctatg	attgatctgg	gtctgtccac	atccactatc	240
cccaaaatgc	taggaatctt	ctggttcaac	ctccaagaga	tcagctttgg	gggatgcctt	300
cttcagatgt	tctttattca	catgtttaca	ggcatggaga	ctgttctgtt	gggtgtcatg	360
gcttatgacc	gctttgttgc	catctgcaac	cctctccagt	acaccatgat	cctcaccaat	420
aaaaccatca	gtatcctagc	ttctgtgggt	gttggaagaa	atttagttct	tgtaacccca	480
tttgtgttcc	tcattctgcg	tctgccattc	tgtgggcata	acatcgtacc	tcacacatac	540
tgtgagcaca	ggggtctggc	cgggttgggc	tgtgcaccca	ttaagatcaa	cataatctat	600
gggctcatgg	tgattttctta	tattattgtg	gatgtgatct	taattgcctc	ttcctatgtg	660
cttatcctta	gagctgtttt	tcgccttccc	tctcaagatg	tccgactaaa	ggccttcaat	720
acctgtgggt	ctcatgtctg	tgttatgctg	tgcttttaca	caccagcatt	tttttctttt	780
atgacacatc	gttttggcca	aaacattccc	cactatatcc	atattctttt	ggctaacctg	840
tatgtgggtg	tcccacctgc	ccttaaccct	gtcatttatg	gagtcaggac	caagcagatc	900
cgagagcaaa	ttgtgaaaat	atttgtacag	aaagaa			936

<210> 380

<211> 909

<212> DNA

<213> Unknown (H38g229 nucleotide)

<220>

<223> Synthetic construct

<400> 380

atgactgaat	tcatttttct	ggtactttct	cccaaccagg	aggtgcagag	ggtttgcttt	60
gtgatatctc	tggtcttgta	cacagcaatt	gtgctgggga	atttcctcat	tggtgctcact	120
gtcatgacca	gcagaagcct	tggttcccc	atgtacttct	tcctcagcta	cctctccttc	180
atggagatct	gctactcttc	cgctacagcc	cccaaactca	tctcagatct	gctgggtgaa	240
aggaaaagtca	tatcttggtg	gggctgcatg	gcacagcttt	tcttcttgca	cttctttggt	300
ggcactgaga	ttttcctgct	cactgtgatg	gcctatgacc	actatgtggc	catctgcaag	360
cccctcagct	acaccaccat	catgaactgg	caggtgtgta	ctgtccttgt	aggaatagca	420
tgggtgggag	gcttcatgca	ttcctttgca	caaatccttc	tcattcttcca	cctgctcttc	480
tgtggcccca	atgtgatcaa	tcactatttc	tgtgacctag	ttccccttct	caaacttgcc	540
tgctctgaca	ccttctctcat	tggtctgctg	attgttgcca	atggaggcac	cctgtctgtg	600
atcagttttg	gggtcctctt	agcctcctat	atggctcatct	tgctccatct	gagaacctgg	660
agctctgaag	ggtgggtgcaa	agccctctcc	acctgtgggt	cccatttcgc	tgtggttatc	720
ttgttctttg	ggccctgcgt	cttcaactct	ctgaggcctt	ctaccactct	gccccatagac	780
aagatgggtg	ctgtgttcta	cacagtgata	accgcgatcc	tgaacctgtg	catctactct	840
ctgagaaatg	ctgaaatgag	gaaggccatg	aagaggctgt	ggattaggac	attgagacta	900
aatgagaaa						909

<210> 381

<211> 947

<212> DNA

<213> Unknown (H38g230 nucleotide)

<220>

<223> Synthetic construct

<400> 381

cttatagcta	caggaaactg	gacaagaata	agtgaagtta	tcctcatgag	cttctcttcc	60
ctgcctactg	aaatacagtc	attactcttt	ctgacatttc	taaccatcta	cctgggtcacc	120
ctgatgggaa	actgcctcat	cattctgggt	accctagctg	accccatgct	acacagcccc	180
atgtacttct	tcctcagaaa	cttatctttc	ctggagattg	gcttcaacct	agtcattgtg	240
cccaaaatgc	tggggaccct	gcttgcccag	gacacaacca	tctccttctt	tggtctgtgcc	300
actcagatgt	atttcttctt	cttcttttga	gtggctgaat	gcttcttcca	ggctaccatg	360
gcatatgacc	gctatgtggc	catctgcagt	cccttgcaat	acccagtcac	catgaaccaa	420
aggactcgtg	ccaaactggc	tgtgtcctcc	tggttcccag	gcttctctgt	agctactgtg	480
cagaccacat	ggctcttcag	ttttccattc	tgtggcacca	acaagggtgaa	ccacttcttc	540
tgtgacagcc	cacctgtgct	gaggctgggt	tgtgcagaca	cagcactgtt	tgagatctac	600
gccatcgtcg	gaaccattct	ggtggtcagt	atccctgct	tgctgatctt	gtgttcttat	660
actcgcattg	ctgtgcctat	cctcaagatc	ccatcagcta	aagggaagaa	taaagccttt	720
tctacatgtt	cctcacacct	ccttggtgtc	tctcttttct	atatatcatt	aagcctcacc	780
tacttccggc	ctaaatcaaa	taattcacct	gagggcacga	agctgctatc	attgtcctac	840
actgttatga	ctcccatgtt	gaaccccat	atctacagcc	tgagaaataa	cgagggtgaag	900
aatgcctca	gcaggacggt	ctctaaggcc	ctagccctca	gaaactg		947

<210> 382

<211> 927

<212> DNA

<213> Unknown (H38g231 nucleotide)

<220>

<223> Synthetic construct

<400> 382

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attgggtatga	tcattttgat	tagcatcagt	cctcagcttc	agagtcccat	gtactttttc	180
ctgagtcctc	tgtcttttgc	ggacgtgtgc	ttctcctcca	acgttacccc	caaaatgctg	240

gaaaacttat	tatcagagac	aaaaaccatt	tcctatgtgg	gatgcttggt	gcagtgtctac	300
tttttcattg	ccgttggtcca	cgtggaggtc	tatatcctgg	ctgtgatggc	ctttgacagg	360
tacatggccg	gctgcaaccc	tctgctttat	ggcagtaaaa	tgtctaggac	tgtgtgtgtt	420
cggctcatct	ctgtgcctta	tgtctatgga	ttctctgtca	gcctaatatg	cacactatgg	480
acttatggct	tatacttctg	tggaaacttt	gaaatcaatc	acttctattg	tgcagatccc	540
cctctcatcc	agattgcctg	tgggagagtg	cacatcaaat	aaatcacaaat	gattgttatt	600
gctggaatta	acttcacata	ttccctctcg	gtggctctca	tctcctacac	tctcattgta	660
gtagctgtgc	tacgcatgcg	ctctgccgat	ggcaggagga	aggcggtctc	cacctgtggg	720
tcccacttga	cggctgtttc	tatgttttat	gggaccccca	tcttcatgta	tctcaggaga	780
cccactgagg	aatccgtaga	gcagggcaaa	atggtggctg	tgttttacac	cacagtaatt	840
cctatgttga	atcccatgat	ctacagtctg	agaaataagg	atgtaaaaga	agcagtcaac	900
aaagcaatca	ccaagacata	tgtgagg				927

<210> 383

<211> 960

<212> DNA

<213> Unknown (H38g232 nucleotide)

<220>

<223> Synthetic construct

<400> 383

atgcttcata	ccaacaatac	acagtttcac	ccttcacact	tcctcgtagt	gggggtccca	60
gggctggaag	atgtgcatgt	atggattggc	ttccccttct	ttgcgggtga	tctaacagcc	120
cttctaggga	acatcattat	cctgtttgtg	atacagactg	aacagagcct	ccaccaaccc	180
atgttttact	tcctagccat	gttggccggc	actgatctgg	gcttgtctac	agcaaccatc	240
cccaagatgc	tgggaatttt	ctggtttaat	cttggagaga	ttgcatttgg	tgcctgcac	300
acacagatgt	ataccattca	tatatgcact	ggcctggagt	ctgtggtact	gacagtcacg	360
ggcatagatc	gctatattgc	catctgcaac	cccctgagat	atagcatgat	ccttaccac	420
aaggtaatag	ccattctggg	catagtcac	attgtcagga	ctttgggtatt	tgtgactcca	480
ttcacatttc	tcaccctgag	attgcctttc	tgtggtgtcc	ggattatccc	tcatacctat	540
tgtgaacaca	tgggcttggc	aaagttagct	tgtgccagta	ttaatgttat	atatggattg	600
attgccttct	cagtgggata	cattgacatt	tctgtgattg	gatttttcta	tgtccagatc	660
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caccgctttg	gccacaacat	ccctcattac	atccacattc	ttctggccaa	tctgtatgtg	840
gtttttcccc	ctgctcttaa	ctctgttatc	tatgggtgca	aaacaaaaca	gatacgagag	900
caggtaactta	ggatactcaa	ccctaaaagc	ttttggcatt	ttgaccccaa	gaggatcttc	960

<210> 384

<211> 936

<212> DNA

<213> Unknown (H38g233 nucleotide)

<220>

<223> Synthetic construct

<400> 384

atggaacaac	acaatctaac	aacgggtgaat	gaattcattc	ttacgggaat	cacagatata	60
gctgagctgc	aggcaccatt	atgtgcattg	ttcctcatga	tctatgtgat	ctcagtgatg	120
ggcaatttgg	gcatgattgt	cctcaccaag	ttggactcca	ggttgcaaac	ccctatgtac	180
ttttttctca	gacatctggc	tttcatggat	cttggttatt	caacaactgt	gggacccaaa	240
atggttagtaa	attttgttgt	ggataagaat	ataatttctt	attatttttg	tgcaacacag	300
ctagctttct	ttcttgtgtt	cattggtagt	gaacttttta	ttctctcagc	catgtccctac	360
gacctctatg	tggccatctg	taacctctct	ctatacacag	taatcatgtc	acgaagggtta	420
tgtcaggtgc	tggtagcaat	cccttacctc	tattgcacat	tcattttctc	tctagtccac	480
ataaagattt	ttactttatc	cttctgtggc	tacaacgtca	ttagtcatct	ctactgtgac	540
agtctccctt	tgttaccttt	gctttgttca	aatacacatg	aaattgaatt	gataattctg	600
atctttgcag	ctattgattt	gatttcattc	cttctgatag	ttctttttat	ttacctgtct	660
atccttgtag	ccattctcag	gatgaattct	gctggcagac	aaaaggcttt	ttctacctgt	720
ggagcccacc	tgacagtggg	catagtgttc	tatgggactt	tgcttttcat	gtacgtgcag	780


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ccccagtcga gtcattccctt tgacactgat aaagtggcctt ccatatttta caccctgggtt      840
atccccatgt tgaatccctt gatctatagt ttacgaaaca aagatgtaaa atatgcccta      900
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<210> 385

<211> 945

<212> DNA

<213> Unknown (H38g234 nucleotide)

<220>

<223> Synthetic construct

<400> 385

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atgatgtggg aaaactggac aattgtcagt gaatttggtc tcgtgagctt ctcagccctg      60
tccactgagc ttcaggctct actgtttctc cttttcttga ccatttactt gggttacttta      120
atgggcaatg tcctcatcat cctgggcact atagctgact ctgcactaca aagtcctatg      180
tacttcttcc tcagaaactt gtccttcctg gagatagggt tcaacttggg cattgtgccc      240
aagatgctgg ggaccctgat cattcaagac acaaccatct ccttccttgg atgtgccact      300
cagatgtatt tcttcttctt ttttggggct gctgagtgtc gcctcctggc caccatggca      360
tatgaccgct acgtggccat ctgtgacccc ttgcactacc cagtcatcat gggccacata      420
tcctgtgccc agctggcagc tgccctcttg ttctcagggt tttcagtggc cactgtgcaa      480
accacatgga ttttcagttt ccctttttgt ggccccaaca ggggtgaacca cttcttctgt      540
gacagccctc ctgttattgc actggctctg gctgacacct ctgtgtttga actggaggct      600
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acctgttccg cccacctctt ggttgtctct ctcttctata gcaactgcat cctcacgtat      780
ttccgacccc aatccagtgc ctcttctgag agcaagaagc tgctgtcact ctcttcaca      840
gtggtgactc ccatgttgaa ccccatcatc tacagctcaa ggaataaaga agtgaaggct      900
gcactgaagc ggcttatcca caggaccctg ggctctcaga aacta      945

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<210> 386

<211> 931

<212> DNA

<213> Unknown (H38g235 nucleotide)

<220>

<223> Synthetic construct

<400> 386

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atggccaaaa ccaataattc agaagttact gaattcatcc tcttgggact cacagacaat      60
ccagagctcc aagccctttt ttagggggat ctttctagt atcaatttaa gtagtgtcat      120
gggtagcctt ggggttaatta tgctaattca tatcagtcct cagcttcaca cagctatgta      180
ttttttctc agccacgtag cttttgttta tttttgctac acctcctcta tcaccctaa      240
cagcctagtg aacctcctcc aagaaactaa aagaatatcc ttacctactt gtgcctctca      300
gttgcatgtc tttatcatgt ttgtggtttg tgacatgtat gtgctctcag ccatggcata      360
tgacaggtat gtggccatct gcaacccttt actctatagt atcatcatga acagaagggt      420
ctgtattcaa atgggtggtaa gtacatattt gtatggcttt tctgtgagac tcctacaggc      480
aattcttaca ttcacttgtt ctttctgaga ttcaaataata ataaataatt cctattgtga      540
tgatgttccc ctagcatgtc taccctatca taaaaacat taaaaagatg taaaagaact      600
gatattgttc acacttgttg gtttcaatac acttttctcc cttcttatea tctcatctc      660
ctacatatca gtactgtctg ccattctgag aattaattca gctgaaagta gacaaaaggc      720
atcttctact tgtgactccc acctgacttc tatcatcata ttttatggta taattacctt      780
catgtatatg cagtgaaaaa caaataattc tctggataca gacaaaatag cttctgtttt      840
ctgtattgtg aaaattcctt caatatatag cctgaggaac cacgaagtca aagatgcttt      900
gaagatgatt atggaaaatc tatgtcttac t      931

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<210> 387

<211> 552

<212> DNA

<213> Unknown (H38g236 nucleotide)

<220>

<223> Synthetic construct

<400> 387

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acactttctg	ttaaataataa	caaatttcta	taaataataa	ataataat	ctaggataa	120
tttaatttac	atagtgaac	aagccattct	taggtatatt	ccttagttct	gtcttcgaaa	180
gtctgcatcc	tgtagcagc	tggcgtagtt	ggtgggatac	ttagcagaag	gattgtatgt	240
gtgtcctact	gtttcactgt	cctcctccag	gtccaatgcc	atcaatcact	ttttctgtaa	300
taaatcccta	gggcttggtc	tttcatgcta	caacatttat	atcagcacag	cagtcctgc	360
ctttgcggag	tttgagtgtc	gcattcattg	ccatatttgg	tcacatgtt	ctcctggaca	420
tatatectgg	ttgctatcaa	gaggatgtcc	tcagtgggga	gaaaagaatt	gtctatttgt	480
gtctcccacc	tgaaaactag	caccattttt	catacagccc	tcttttatgt	gtacttacag	540
cctgattttt	tt					552

<210> 388

<211> 963

<212> DNA

<213> Unknown (H38g237 nucleotide)

<220>

<223> Synthetic construct

<400> 388

atgtctgggg	acaacagctc	cagcctgacc	ccaggattct	ttatcttgaa	tggcggttct	60
gggctggaag	ccacacacat	ctggatctcc	ctgccattct	gctttatgta	catcattgct	120
gtcgtgggga	actgtgggct	catctgcctc	atcagccatg	aggaggccct	gcaccggccc	180
atgtactact	tcctggccct	gctctccttc	actgatgtca	ccttgtgcac	caccatggta	240
cctaataatgc	tgtgcatatt	ctggttcaac	ctcaaggaga	ttgactttaa	cgctgcctg	300
gcccagatgt	ttttgtcca	tatgctgaca	gggatggagt	ctgggggtgt	catgctcatg	360
gccctggacc	gctatgtggc	catctgctac	cccttacgct	atgccaccat	ccttaccac	420
cctgtcatcg	ccaaggctgg	tcttgccacc	ttcttgagga	atgtgatgct	catcatccca	480
ttcactctcc	tcaccaagcg	cctgccctat	tgcgggggga	acttcacccc	ccacacctac	540
tgtgaccata	tgtctgtggc	caaggatatc	tgtggcaatt	tcaagggtcaa	tgctatttat	600
ggtctgatgg	ttgtctcct	gattgggtgtg	tttgatatct	gctgtatctc	tgtatcttac	660
actatgattt	tgcaggctgt	tatgagcctg	tcacacagcag	atgctcgtca	caaagccttc	720
agcacctgca	catctcacat	gtgttccatt	gtgatcacct	atgttgctgc	ttttttcact	780
tttttcactc	atcgttttgt	aggacacaa	atcccaaacc	acatacacat	catcgtggcc	840
aacctttatc	tgctactgcc	tcctaccatg	aacccaattg	tttatggagt	caagaccaag	900
cagattcagg	aagggtgta	taaattttta	cttgagagaca	aggttagttt	tacctatgac	960
aaa						963

<210> 389

<211> 400

<212> DNA

<213> Unknown (H38g238 nucleotide)

<220>

<223> Synthetic construct

<400> 389

tgtttctgtg	gctttgtgtg	tctcaccagt	tgccgtttct	gtctaaccce	ggagaggtaa	60
ataacaccct	gagaatggcc	ctaggctcac	acaggtttcc	cagttagcca	atcaagaaga	120
attacaaatg	gccacactat	cagccagagc	tgctgcctca	ctggagttcc	aaaacggaga	180
ggatctgtc	ccctgcaccc	tcaggcttgg	aaatgctgag	aaatgctaag	ccactggggt	240
ttcaattata	cctaatttaa	aacgagcaaa	gtagacttgc	cccccaagg	gttccacaaa	300
aaacttaaag	cctggcagct	cagccctgag	ttcatactgc	ttaaaagaca	ccgggggagg	360
aggtaagtga	tcagggtgaga	gaagttcggt	ccccagagag			400

<210> 390

<211> 954

<212> DNA

<213> Unknown (H38g239 nucleotide)

<220>

<223> Synthetic construct

<400> 390

atgaagccaa	caatacaaat	ggcttcagga	aatctcacat	gggtgacgga	gttcattctt	60
gtgggagtc	cagatgatcc	ggagctccag	attccccct	tcctgggtctt	cctgggtgctc	120
tatttgctga	ccgtggcagg	gaacctgggc	atcatcaccc	tcaccagtgt	tgaccctcaa	180
cttcaaacc	ccatgtactt	tttctctga	cacttggcta	ttattaatct	ttgcaattct	240
actgtcgtt	cccctaaaat	gctggttaac	ttcctgggta	ccaagaaaac	catatcatac	300
tatggatgt	cagcccaact	gggtggattc	ttgggtttca	ttgtggctga	gattttcacg	360
ctggctgcaa	tggcctatga	ccgctatgtg	gctatttggg	gccctctgct	ctacgcgta	420
gtgggtgtc	caaaggtgtg	tcgtctgctg	gtgtccctca	cataccttca	gagtcttata	480
acagactga	ctgtctcttc	ctgtgtgttc	tctgtgtcat	actgttcttc	caacattatc	540
aaccatttt	actgtgatga	tgtccctttg	ctagcattgt	cctgttctga	tacctacatt	600
ccagaaacag	cagtctttat	cttttcagg	accaacttgc	ttttctccat	gacgttggt	660
ctgatatac	acttcaacat	tgttattacc	attttgagga	tacgttcctc	agaaggacga	720
caaaaagcct	tttccacctg	tgcttctcac	atgatagctg	tggttggtgt	ctatgggact	780
ctccttttca	tgtatttgca	accaaggagt	aatcattcat	tagatactga	caaatggct	840
tcgggtctt	acacctgggt	gataccagtg	ctgaaccttc	taatctacag	cctcaggaac	900
aagaacgtga	aggatgcact	aaagaggttc	ctagataacc	catgccgata	actc	954

<210> 391

<211> 945

<212> DNA

<213> Unknown (H38g240 nucleotide)

<220>

<223> Synthetic construct

<400> 391

atgttgctcc	caaaccacac	catagtgaca	gaattcattc	tcttaggact	gacagacgac	60
ccagtgttag	agaagatcct	gtttgggggt	ttcctggcga	tctacctaat	cacactggca	120
ggcaacctgt	gcatgatcct	gctgatcagg	accaattccc	aactgcaaac	acccatgtat	180
ttcttccctg	gtcactcttc	ctttgtagac	atttgctatt	cttccaatgt	tactccaaat	240
atgctgcaca	atcttctctc	agaacagaag	accatctcct	acgctggatg	cttcacacag	300
tgtcttctct	tcacgcacct	agtgatcact	gagttttact	tccttgcttc	aatggcattg	360
gatcgctatg	tagccatttg	cagcccttta	cattacagtt	ccaggatgtc	caagaacatt	420
tgcattctct	tggctactgt	gccttacatg	tatggcttcc	ttaatgggct	ctctcagaca	480
ctgctgacct	ttcacttata	cttctgtggc	tcccttgaaa	tcaatcattt	ctactgcgct	540
gatcctcctc	ttatcatgct	ggcctgctct	gacaccctgt	tcaaaaagat	ggcaatgttt	600
gtagttgcag	gctttactct	ctcaagctct	ctcttcatca	ttcttctgtc	ctatcttttc	660
atttttgcag	cgatcttcag	gatccgttct	gctgaaggca	ggcacaaaag	cttttctacg	720
tgtgcttccc	acctgacaat	agtcactttg	ttttatggaa	ccctcttctg	catgtacgta	780
aggcctccat	cagagaagtc	tgtagaggag	tccaaaataa	ttgcagtctt	ttatactttt	840
ttgagcccaa	tgctgaacct	attgatctat	agcctacgga	acagagatgt	aatccttgcc	900
atacaacaaa	tgattagggg	aaaatccttt	tgtaaaattg	cagtt		945

<210> 392

<211> 939

<212> DNA

<213> Unknown (H38g241 nucleotide)

<220>

<223> Synthetic construct

<400> 392

atgcctatag	ctaacgacac	ccagttccat	actttcttcat	tcctactgct	gggtatccca	60
gggctagaag	atgtgcacat	ctggattgga	ttcccttttt	tctctgtgta	tcttattgca	120

ctcctgggaa	atgctgctat	cttctttgtg	atccaaactg	agcagagtct	ccatgagccc	180
atgtactact	gcctggccat	gttggattcc	attgacctga	gcttgtctac	ggccaccatt	240
cccaaaatgc	tgggcatctt	ctgggtcaat	atcaaggaaa	tatcttttgg	aggctacctt	300
tctcagatgt	tcttcatcca	tttcttcaat	gtcatggaga	gcacgtattt	ggtggccatg	360
gcctttgacc	gctacattgc	catttgcaaa	cctctttggg	acaccatgat	cctcaccagc	420
aaaatcatca	gcctcattgc	aggcattgct	gtcctgagga	gcttgtacat	ggtcattcca	480
ctgggtgttc	tctctttaag	gttgcccttc	tgtggacatc	gtatcatccc	tcatacttac	540
tgtgagcaca	tgggcattgc	ccgtctggcc	tgtgccagca	tcaaagtcaa	cattatgttt	600
ggtcttggca	gtatttctct	cttggtattg	gatgtgctcc	ttattattct	ctcccatatc	660
aggatcctct	atgctgtctt	ctgcctgccc	tcctgggaag	ctcgactcaa	agctctcaac	720
acctgtggct	ctcacattgg	tgttatctta	gccttttcta	caccagcatt	tttctcttct	780
tttacacact	gctttggcca	tgatattccc	caatatatcc	acattttctt	ggctaattcta	840
tatgtggttg	ttctccccc	cctcaatcct	gtaatctatg	gggtcagaac	caaacatatt	900
aggagacag	tgctgaggat	tttcttcaag	acagatcac			939

<210> 393

<211> 984

<212> DNA

<213> Unknown (H38g242 nucleotide)

<220>

<223> Synthetic construct

<400> 393

atgcatactt	tcaagtttgt	tctagatttc	aacatgaaga	atgtcactga	agttacctta	60
tttgtaactga	agggcttcac	agacaatctt	gaactgcaga	ctatcttctt	cttctgtttt	120
ctagcaatct	acctcttcac	tctcatggga	aatttaggac	tgatttttagt	ggtcattagg	180
gattcccagc	tccacaaacc	catgtactat	tttctgagta	tgttgtcttc	tgtggatgcc	240
tgctattcct	cagttattac	cccaaataatg	ttagtagatt	ttacgacaaa	gaataaagtc	300
atttcattcc	ttggatgtgt	agcacagggtg	tttcttgctt	gtagttttgg	aaccacagaa	360
tgctttctct	tggttgcaat	ggcttatgat	cgctatgtag	ccatctacaa	ccctctcctg	420
tattcagtga	gcatgtcacc	cagagtctac	atgccactca	tcaatgcttc	ctatgttget	480
ggcattttac	atgctactat	acatacagtg	gctacattta	gcctatcctt	ctgtggagcc	540
aatgaaatta	ggcgtgtctt	ttgtgatatc	cctcctctcc	ttgtctatttc	ttattctgac	600
actcacacaa	accagcttct	actcttctac	tttgtgggct	ctatcgagct	ggtcactatc	660
ctgattgttc	tgatctccta	tggtttgatt	ctgttgccca	ttctgaagat	gtattctgct	720
gaagggagga	gaaaagtctt	ctccacatgt	ggagctcacc	taactggagt	gtcaatttat	780
tatgggacaa	tctcttccat	gtatgtgaga	ccaagttcca	gctatgcttc	ggaccatgac	840
atgatatgtg	caatatctta	caccattgtg	attcccttgc	tgaatcccgt	catctacagt	900
ttgagggaaca	aagatgtaaa	agactcaatg	aaaaaaatgt	ttgggaaaaa	tcagggttatc	960
aataaagtat	attttcatat	taaa				984

<210> 394

<211> 984

<212> DNA

<213> Unknown (H38g243 nucleotide)

<220>

<223> Synthetic construct

<400> 394

atgaatggag	ccaacagctc	cagcctgaca	ccaagatatt	tcattctcag	tggcgttctt	60
gggctggaag	ctgcacacat	ctggatctcc	ctgcctttct	gcttcatgta	catcattggt	120
gttttgggga	actgtggact	tatatacctc	attagccatg	aggaggccct	gcaccaaccc	180
acctactact	tcctagactt	gctgtctctt	acagatgtta	ctggatgcac	ctcatttggt	240
cccaatatgt	tatgtatttt	ttggtttggc	ctcaaggaaa	ttgactttaa	tgctgtcctt	300
gtgcagatgt	ttttcatcca	catgctgaca	ggcatggagt	ctggggcgct	catgcttatg	360
gctctagacc	gctatgtggc	catttgctac	cctctacact	attccaccat	cttcaccaac	420
actgtaatta	ccaaagttag	gcttgtcacc	ttcattcaaa	gtgtgttgct	tatgattcca	480
tttgctttcc	tgatcaagtg	tcttccctat	tgcaggggca	acctcatcca	ccacacctat	540
tttaacatat	gtctgtggcc	aaattatcct	gtggtaatgt	ccagattaat	gccatctatg	600

gtctcatagc	tgccatattg	attggggggg	ttgacatgtt	ctgtatctcc	atgtcttaca	660
ccatgattat	ccgtgctgta	gtgaatttgt	catctgcaga	tgctgccaca	aagccttcag	720
tacctgtaca	gcacatatat	gtgctatttt	catcacttat	gtcccagcct	ttttcaactt	780
cttcactcac	cgctttgggg	gacacaccat	acctcatcat	gttcacattt	ttatagccaa	840
cctttacctg	atgctgcctc	ccaccttaaa	tccaattgtc	tatggagtga	agaccaagca	900
gatccgtgaa	ggagtgatca	aattgttttt	tagagagaaa	ggtattttta	gtatgacata	960
aatctatgat	atagaagtct	gaat				984

<210> 395

<211> 903

<212> DNA

<213> Unknown (H38g244 nucleotide)

<220>

<223> Synthetic construct

<400> 395

atggccagta	caaataatgt	gactgagtca	atgacaccca	gcctttttcca	ggatccagca	60
gtgcagagag	tgtgctttgt	ggtgtttctc	cccgtgtact	ggccatggag	gtgggcaatg	120
gcctcatcgt	tctgacgggc	agtatcagca	agagtctgca	ttcccctgtg	tacttcttcc	180
tgagctacct	gtcattgatg	gagatcagtt	acttcactgt	tgcccctaaa	ttcatcacag	240
acttacttgc	caagattaaa	gccatctctc	tggagggcta	tctggctcag	atattcttgc	300
acttctttgg	catcccctgg	atctttctgc	tcccactgat	gaccaatgac	caatataatg	360
ccaactgcaa	actttattac	tacacaacca	tcatgagctg	cctgtctgtc	accttctggt	420
ggctgggttc	tggctgaggg	gcataattca	ctcaatgggt	cagatccttg	tctctgtcca	480
attgttcttc	tgtggtccca	acatgattga	ccactcattc	tgtgacctcc	aggtcttatt	540
caagcttgcc	tgcactgaca	cctttgtgga	gggggttatt	gtgttggcca	acagtgaatt	600
agtatctgtc	ttcttcctta	tcttggtgtc	ctcttaatat	catcatccta	gtcaacttga	660
ggaaccattc	tgcagagggg	aggtgcaaag	ccctctccac	ctgtgcctct	tatcttgtat	720
tttgaacttg	ccatttttct	ctacgtgtga	ctctctccca	cctttactaa	agataaaactc	780
gtggctgtat	tttacgtggt	catcaccccc	atgctgaacc	ccttcatcta	cacgcttggg	840
aatgcagaga	tgaaaatcac	catgaggaga	ttgttgggca	ggacagtga	ctcaggaatg	900
gaa						903

<210> 396

<211> 972

<212> DNA

<213> Unknown (H38g245 nucleotide)

<220>

<223> Synthetic construct

<400> 396

gggagctgaa	agcaatgaaa	gtcttgacct	cctatctgtc	ttcctgactg	gcateccagg	60
actggaggcc	caacatgggt	ggctctccat	ccctttcttc	accatgtaca	ttgtggccat	120
tgtgggaaac	atcctaatta	tggcagcagt	gcaggaagac	tctgccctac	atgagcccat	180
gtacttattt	ctctccatgt	tggctgtcac	tgaggtgggc	gtctctgtgt	ctacactgct	240
actgttacag	gcattctttg	gtttgatgcc	cacagagttg	actttgatgg	ctgcctggcc	300
cagatgttct	tcattcacac	cttctcctgc	atggagtcag	gggtcctact	agccatgagc	360
tatgaccgct	ttgtagccat	ctacaacctc	ctgcctata	cagccatcct	gacctgccc	420
cgtattatct	gcatgggtct	gggcattaca	ctgaagagtg	tggcactcat	ggccccactt	480
ccaatccttt	tgagggcaact	gccctattgc	cacactaatg	tcctctcaca	ctcctactgc	540
ctccactcag	atctgatcca	gctgccttgt	gcagatacta	aactcaacag	catcctgggc	600
ttagccattg	ttctcgcaaa	tttcgggctg	gactcattgc	ttatcgtggg	ctcttatgtc	660
ttgattcttt	atacagtgat	gggcattgct	tctggagagg	gacgggtggaa	ggctctcaac	720
acatgtgtgt	cacatatttg	tgcagtgtct	atatattatg	tgcccatgat	tggggtgtct	780
gtgatgcac	gtgctgccaa	acatgtctct	cccattgtcc	acacacttat	gtctagcatc	840
tgccttttgg	tgccacctgt	acttaatccc	atcatctata	gtgttaagac	ccagacaata	900
agacagggaa	ttctcacctt	gttttctctg	aagagggaa	tgctctgaat	cactgcaagg	960
agtcaggaac	tg					972

<210> 397
 <211> 874
 <212> DNA
 <213> Unknown (H38g246 nucleotide)

<220>
 <223> Synthetic construct

<400> 397
 actttgttta ttatttcaaa atttcaaggc tgctgaaagg taggtcttta tacacagtca 60
 ctttatttgc tagctgagta ttttcatcgg gggcaactga tgaaaatggt gacttccact 120
 aacctaaagcc tgtccgttgt tactatcgta tcttccagtt caacgtcagg gaaatagttt 180
 ttggtgcttt ccttgtttat atacagatgt ttatgactta tctatgcact ggccctggaat 240
 ctgggggtact gataatcctg gccatagacc actatgtcgt aattcgcaat ccactgagat 300
 ataccatgat tctcatgaac aatgtggttag ccacccatagg aagtcattgat aattagatct 360
 ttaatcttta tcatcccttt tgagtttctc atcttgctgt tgtcattctg tgctgcccac 420
 atcatccccc acaccaaagtg tgagcacatg ggcattgccc atctttcctg tgccagtgtc 480
 agagccaata atatgttttg gatggttgcc tttttgtggg atttattgac cttattgcaa 540
 ttggtttctc ctatgtaaag aaactacaca ctgtttcact taccaccatg gaatggccag 600
 ttcgaggctc tcaataacctg tgggtcccat gtttgtcatg ctcatcttct acatcccagt 660
 attttttttc tgatacactg cttggtgaaa gcatccctgc tatattcgta tatttctggc 720
 caatgtatat acggttggtc tacctgtatt caaccctgtt atctatggga tcaggaaaaa 780
 acagatccca gactagggtg tagacctaaa gacatttgat gatcagtcac ttctagtcac 840
 gatgatatat atattgggat atatatgcaa atat 874

<210> 398
 <211> 936
 <212> DNA
 <213> Unknown (H38g247 nucleotide)

<220>
 <223> Synthetic construct

<400> 398
 atggatgaag ccaatcactc tgtggtctct gagtttgtgt tccctgggact ctctgactcg 60
 cggaagatcc agctcctcct ctctctcttt ttctcagtgt tctatgtatc aagcctgatg 120
 ggaaatctcc tcatgtgtgt aactgtgacc tctgaccctc gtttacagtc ccccatgtac 180
 ttcctgctgg ccaacctttc catcatcaat ttggtatttt gttcctccac agctcccaag 240
 atgatttatg accttttcag gaagcacaag accatctctt ttgggggctg tgtagttcag 300
 atcttcttta tccatgcagt tgggggaact gagatggtgc tgctcatagc catggctttt 360
 gaccgatatg tggccatatg taagcctctc cactacctga ccatcatgaa ccacaaaagg 420
 tgcattttgt ttttagtcat ttctgggatt ataggtatta ttactcagt gattcagttg 480
 gcttttggtg tagacctgct gttctgtggc cctaataaat tagatagttt cttttgtgat 540
 ctctctcgat ttatcaaact ggcttgcata gagacctaca cattgggatt catggttact 600
 gccaatagtg gatttatttc tctggcttct tttttaattc tcataatctc ttacatcttt 660
 attttggtga ctgttcagaa aaaatcttca ggtggtatat tcaaggcttt ctctatgctg 720
 tcagctcatg tcattgtggt ggttttggtc tttgggcat taatcttttt ctatattttt 780
 ccatttccca catcacatct tgataaattc cttgccatct ttgatgcagt tatcactccc 840
 gttttgaatc cagtcactta tacttttaga aataaagaga tgatggtggc aatgagaaga 900
 cgatgctctc agtttgtgaa ttacagtaaa atcttt 936

<210> 399
 <211> 503
 <212> DNA
 <213> Unknown (H38g248 nucleotide)

<220>
 <223> Synthetic construct

<400> 399
 aagcagtcca gtggtgacag tgggaaccag accacctggc tgatcctagt gggcttcggg 60

gagctgcaat	acctgggctt	ccttcccttc	actctcttcc	tggccatcta	tgtggtgaca	120
gttggggcaa	tgccctcatc	atgctggctg	tggcctctag	tcggacactg	cacccaccaa	180
tgtactttct	cctctgccac	ttctccctgc	tggagattgg	ctatacctcc	aacgtcatac	240
tatggctgtt	gcagagtttc	ttggagggga	aggaagtcac	ctctctagtc	agctgtctgg	300
ctcagttcta	cgtgttttcc	tcgctggctg	cagctgagtg	cctcctgcta	tctgccgtgt	360
cctatgactg	ttacttggcc	atctgctgcc	cccttcaacta	tcctgccctg	atgagcacct	420
ggttttgtca	ctgcctggcc	gctgggtgctt	ggttcagtg	cttcttctcc	tctgccttca	480
ctatggccct	ggcagcacct	ctg				503

<210> 400

<211> 963

<212> DNA

<213> Unknown (H38g249 nucleotide)

<220>

<223> Synthetic construct

<400> 400

atgctaacac	tgaataaaac	agacctaata	ccagcttcat	ttattctgaa	tggagtccca	60
ggactggaag	acacacaact	ctggatttcc	ttccattctt	gctctatgta	tgttgtggct	120
atggtaggga	attgtggact	cctctacctc	attcactatg	aggatgccct	gcacaaaccc	180
atgtactact	tcttggccat	gcttttcttt	actgaccttg	ttatgtgctc	tagtacaatc	240
cctaaagccc	tctgcatctt	ctggtttcat	ctcaaggaca	ttggatttga	tgaatgcctt	300
gtccagatgt	tcttcatcca	caccttcaca	gggatggagt	ctgggggtgt	tatgcttatg	360
gccctggatc	gctatgtggc	catctgctac	cccttacgct	attcaactat	cctcaccaat	420
cctgtaattg	caaaggttgg	gactgccacc	ttcctgagag	gggtattact	cattattccc	480
tttactttcc	tcaccaagcg	cctgccctac	tgcagaggca	atatacttcc	ccatacctac	540
tgtgaccaca	tgtctgtagc	caaattgtcc	tgtggtaatg	tcaagggtcaa	tgccatctat	600
ggtctgatgg	ttgccctcct	gattgggggc	tttgacatac	tgtgtatcac	catctcctat	660
accatgatcc	tccgggcagt	ggtcagcctc	tcctcagcag	atgctcggca	gaaggccttt	720
aatacctgca	ctgcccacat	ttgtgccatt	gttttctcct	atactccagc	tttcttctcc	780
ttcttttccc	accgcttttg	ggaacacata	atcccccttt	cctgccacat	cattgtagcc	840
aatattttatc	tgctcctacc	accactatg	aaccctattg	tctatggggg	gaaaaccaa	900
cagatacgag	actgtgtcat	aaggatcctt	tcaggttcta	aggataccaa	atcctacagc	960
atg						963

<210> 401

<211> 945

<212> DNA

<213> Unknown (H38g250 nucleotide)

<220>

<223> Synthetic construct

<400> 401

atgacaacac	accgaaatga	caccctctcc	actgaagctt	cagacttctc	cttgaattgt	60
tttgtcagat	ccccagctg	gcagcactgg	ctgtccctgc	ccctcagcct	ccttttctctc	120
ttggccgtag	gggccaacac	caccctcctg	atgaccatct	ggctggaggc	ctctctgcac	180
cagccccctgt	actacctgct	cagcctcctc	tcctgtctgg	acatcgtgct	ctgcctcact	240
gtcatcccca	aggctctgac	catcttctgg	tttgacctca	ggcccatcag	cttccctgcc	300
tgcttctctcc	agatgtacat	catgaattgt	ttcctagcca	tggagtcttg	cacattcatg	360
gtcatggcct	atgatcgtaa	tgtagccatc	tgccaccac	tgagatatcc	atcaatcatc	420
actgatcaact	ttgtagtcaa	ggctgccatg	tttattttga	ccagaaatgt	gcttatgact	480
ctgccccatcc	ccatcctttc	agcacaactc	cgttattgtg	gaagaaatgt	cattgagaac	540
tgcatctgtg	ccaatatgtc	tgtttccaga	ctctcctgcg	atgatgtcac	catcaatcac	600
ctttaccaat	ttgctggagg	ctggactctg	ctaggatctg	acctcatcct	tatcttctctc	660
tcctacacct	tcattctgctg	agctgtgctg	agactcaagg	cagagggtgc	cgtaggcaaa	720
gcccctaacg	catgtggctc	ccacttcatg	ctcatcctct	tcttcagcac	catccttctg	780
gtttttgtcc	tcacacatgt	ggctaagaag	aaagtctccc	ctgatgtgcc	agtcttgctc	840
aatgtttctcc	accatgtcat	tcctgcagcc	cttaacccca	tcatttacgg	ggtgagaacc	900
caagaaatta	agcagggaat	gcagaggttg	ttgaagaaag	ggtgc		945

<210> 402
 <211> 906
 <212> DNA
 <213> Unknown (H38g251 nucleotide)

<220>
 <223> Synthetic construct

<400> 402

ttgagctcta	tgtgtctcac	cattgtgatg	cattgtgaat	tcttcctcat	ggacttgact	60
gatgatcctc	agcttcatcc	caccttctct	gccctcttcc	tccccatcta	tgtagtcatg	120
gtgatggaaa	cctgggcctc	cttgcccttca	ttgtgggtcag	tccccaattc	ctcaccacca	180
tgtattttctt	cctcagcaac	tggtcctctg	ttgacttctg	ttattcttca	gtaacagtcc	240
caaaaatata	aatgggggttc	ttttctgact	gccaagtctt	ctccttctct	ggttgcatgg	300
cccagttaag	ctgcttttaa	aatatttgct	gacaccgagt	tcttcctcct	ggcctccatg	360
gtctattacc	gctaagaggc	cgtctgcaat	cctctgctct	accatatcac	catgtcccca	420
aagctctgct	tgcagctggg	ggccaccagc	tatgaacatg	gtgctcccta	gtagcacaat	480
ctttcatctg	atcttctgta	agtctgtgcc	atcattcatt	aattctgtta	tttccctccc	540
caccgaggct	ttaaaaactc	tcctgctctg	acatgcaagg	ccttcaactt	cttacctttg	600
cctctagtag	ctttaatgta	tcgggtgtccc	ggacaatctt	ccttgtctcc	atttaattat	660
gagaatgccc	tcgggtttgag	gcaaacactt	gtgcttccca	cctgacagca	gtcagcctgt	720
gctatggaac	cacagtgttc	cttcacctgc	acctatcctt	gaagtgttca	ccagacagag	780
atatgctggt	ctctgtttta	cacagtggct	attctcatgc	tcaaccccat	gggtccaaagt	840
ctgaggaaca	aggatgtgaa	gaaaacattt	gggacttcct	catgaagggt	tacaattcct	900
ctcctt						906

<210> 403
 <211> 972
 <212> DNA
 <213> Unknown (H38g252 nucleotide)

<220>
 <223> Synthetic construct

<400> 403

atgcctctat	ttaattcatt	atgctgggtt	ccaacaattc	atgtgactcc	tccatctttt	60
attcttaatg	gaataacctg	tctggaaaga	gtacatgtat	ggatctccct	cccactctgc	120
acaatgtaca	tcattcttct	tgtggggaat	cttgggtctg	tgtacctcat	ttattatgag	180
gagtccttac	atcatccgat	gtattttttt	tttggccatg	ctctctccct	cattgacctc	240
cttacctgca	ccaccactct	acccaatgca	ctctgcatct	tctgggttcag	tctcaaagaa	300
attaacttca	atgcttgctt	ggcccagatg	ttctttgttc	atgggttcac	aggtgtggag	360
tctgggggtg	tcattgctcat	ggctctagac	cgctatgtag	ccatttgcta	ccctttgcgt	420
tatgctacca	cactcaccaa	ccctatcatt	gccaaggctg	agcttgccac	cttctgagg	480
ggtgtattgc	tgatgattcc	tttcccattc	ttgggttaagc	gtttgccttt	ctgccaaagc	540
aatattatct	cccatacgta	ctgcgaccac	atgtctgtag	taaagctatc	ttgtgccagc	600
atcaagggtca	atgtaatcta	tgggtctaag	gttgcctctc	tgattggagt	gtttgacatt	660
tgtttgtatat	ctttgtctta	cactttgatc	ctcaaggcag	cgatcagcct	ctcttcatca	720
gatgctcggc	agaaggcttt	cagcacctgc	actgcccata	tatctgccat	catcatcacc	780
tatgttccag	cattcttcac	tttctttgcc	caccgttttg	ggggacacac	aattccccct	840
tctcttcaca	tcattgtggc	taatctttat	cttcttcttc	ccccaactct	aaacctatt	900
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aagggtgcag	gt					972

<210> 404
 <211> 821
 <212> DNA
 <213> Unknown (H38g253 nucleotide)

<220>
 <223> Synthetic construct

<400> 404

gagagaaaatc	ccagtgtagc	agaaaagtgc	cttcaagggg	tgactgattc	ctctcaccat	60
tatcttttagc	ttaaactccct	ctcttcaggc	tgtaaatcct	cttgataact	atcattacga	120
tagggaattt	gggcacgggc	attctcattg	ggatcagtct	cggtttata	gtctgtctcg	180
cctagatttc	tgctattcac	tttttccatg	ctcagagtcc	tagtaaaatg	tttttgaagt	240
acagtgtctgc	ccttctcttt	ctggagtctt	gaagcacaga	ttaaactctt	cagcatcttg	300
tgtatcacag	agttcttttc	cttggccaca	atggcctatg	atgacaatgt	tgccacttgt	360
gaacctttat	tccacctttt	caccagtttg	agactcaact	ggcatttggt	tgagaaaaac	420
tgtatcttag	agccttcacc	tcagccctcc	cctcaactct	tccgttccac	ctccccttct	480
tcaattecca	cttgtgtctca	cttcagtgc	attactttct	gggtcaagtt	gtcctctgaa	540
acatgactcc	caactttaaa	ctccctgatt	tctctaactc	caatgtgaac	ttagtaagcc	600
tgtgtgtctc	aaccatctgc	tgctacccca	tcattttaag	gtcattatca	tcccataact	660
aatctgaaaa	acaaattatt	gataatcatt	ttttttcaga	attccactca	ttgtctctta	720
ttttctgttc	agatgaaaat	gtttattaaa	ccatttgagg	tatcactgac	tagttcatta	780
aaagtaaaca	ttgtgtacat	attcccttaa	tgcagattct	t		821

<210> 405

<211> 945

<212> DNA

<213> Unknown (H38g254 nucleotide)

<220>

<223> Synthetic construct

<400> 405

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aggattggaa	gctgcacaac	gctggctagg	ctttcccttc	tgtgttgat	atctgattgc	120
tcttgttggg	aatcttatca	ttctatttgt	tatctggact	gataaaaacc	ttcaccaacc	180
catgttctac	ttcttgccca	tgctgtcagt	catgacctga	gtctttctac	atctactatc	240
cccaagatgt	tgggcatctt	ctgggtcagc	cttcaggagt	tgtgctttgg	gtgctgtgtt	300
gctcaagtct	tttttatcca	ttttttttgc	agtcattggg	agcattgtac	ttcttgtcat	360
gggatttgat	cgctatgtgg	ctatttgcaa	ccccctcagg	tagaccaaga	tcctcaccaa	420
cagaattact	gggtgtgattg	ctatggttgt	ggttcttaga	agcttatgta	tgattgctcc	480
catcattttt	ctcctcatga	ggctgcctta	ctgtggacat	agaatcatcc	cttataccta	540
ttgtgagcac	atgggagtgg	ctcgtctggc	ttgtgccagc	atcagtgtca	atgtctctca	600
tggctctggg	aatattttta	tcttgtttct	ggatatgttt	cttatcatca	tctcctatgc	660
tagaatttta	tgcacagtct	ttcacctccc	ttcccaagag	gcccacctga	aggctcttaa	720
tacctgtagc	tcccatatct	gtgtcatctt	agcatttttt	ggcccagctc	tcttctcctt	780
tctcactcat	cgctttgggc	atggcatccc	acagtatata	catattctcc	tggctaattct	840
ctatatatag	tcattccccc	tgctcttaac	ccagtcattt	atggagttag	gaccaagcaa	900
atccaggagc	gggtagaaaag	tctctttact	aaaaattgat	tgaat		945

<210> 406

<211> 970

<212> DNA

<213> Unknown (H38g255 nucleotide)

<220>

<223> Synthetic construct

<400> 406

gtggaaaatt	cacccatggg	gactgacttc	atctttctcg	gcatgacaga	taactctcag	60
cttgaagtcc	tgctatttgg	agtctttctt	attgcttaca	tcactactgt	gttggagaat	120
ctaggccttg	tgggtctgat	cagagtcagc	tcccgcctcc	acaccccatg	tactttttcc	180
tctctaataca	gtccttccct	gatgtctgtt	tctcttccat	tacaattcca	cagaatttag	240
cacatttggt	ttctaagctg	cagtatgttt	ctttcccttt	ccgtataaac	ttaaatgagc	300
ttgtttgtaa	tctttgcctc	tgctgaatgc	aattttttaa	acttgcattg	cctatgaccg	360
ctttactgcc	atctgtcacc	cactgttcta	ccacattacc	atgtcaagag	gccattatct	420
tttcttggtg	gcaggatgct	accttggtgg	gttagttaag	atggtcactg	tgacaacttc	480
catcacacaa	ctatcgcttt	gtcaaccatg	tgtcctccct	gccttcttct	gtgacattcc	540

ctcattgttg	gtactgggtt	gctcagatcc	ttggatcacc	tcccgatctt	ggtgggtggc	600
tgtgggggat	tcaccctggg	cacctctgtt	gtggtgatcc	ttgtctccta	catgtcttcc	660
ctcatgacta	tcctaggaat	tcccttagct	tctggaaaac	agagagcctt	ctccacctgt	720
gcctcccact	tgactgctgt	tagcctgtac	tatgaaacaa	ctatgtacac	ttacttgccc	780
gcctcgcgac	atggatccgg	ggcaggaaat	cagattgtgt	cagtatttta	tacaatgggtg	840
atccccatgt	taaatacctct	catctatagt	ttgagaaatg	aggaagtga	agttgcccta	900
tgaaaaacat	tgagacatag	tccttaaatct	tctattgagt	gtctcaaaaa	tgcaaaatat	960
tctgtgaaga						970

<210> 407

<211> 934

<212> DNA

<213> Unknown (H38g256 nucleotide)

<220>

<223> Synthetic construct

<400> 407

tggcttgatg	aaaaaaaaaca	agatttctaac	gtgacagaac	ttgttcttct	gggcctatca	60
tcttcttggg	agctgcagct	atcttctctta	ttactatttt	tgttttttta	cattgctatt	120
gtcctgggaa	acctcttgat	agtggtaaca	gtgcaagccc	atgctcatct	gtcccaatct	180
cctatgtatt	atcttttagg	tcactctctct	ttcattgacc	tatgcctaag	ctgtgttact	240
ctgccaaaaga	tgtaggggga	tttcctacag	cagggcaaga	gcattctctt	ttcaggatgc	300
ctggcccaga	tctacttcct	ccactttcta	ggagccagtg	agatgttttt	gctgacagtt	360
atggcctatg	acaggtatgt	tgccatctgt	aaccctttgc	gctaccttat	aagtcatgaa	420
ccccagcta	tgcttttggg	tggttcttgc	ctgctgggtg	gggggtttta	tccactctat	480
catgcaggtc	atactagtca	tccagctgcc	tttctgtggc	cccaatgaac	tggacaactt	540
ctactgtgat	gtcccacagg	tcacaaagct	ggcctgcatg	gacacctatg	tggtagagggt	600
gctgatgata	gccaacagtg	gtctgctctc	tcttgctgc	ttcttgggtc	tactattctc	660
ttatgctgtc	atcctgatca	ccctgagaac	acacttcggc	cagggccaga	acaagttcct	720
ctctacctgt	gcttctcacc	tgacagtggg	cagcctgatc	ttcatgccat	gtatattcat	780
ctatttgagg	cctttctgca	gcttctctgt	ggataagata	ttctccatgt	tttacacagt	840
gatgacacct	atggttgagc	ccctcatcta	cacactcaga	aatgctgata	tgaagacagc	900
tatgaagaag	ctgaggataa	aaccatgtga	catt			934

<210> 408

<211> 954

<212> DNA

<213> Unknown (H38g257 nucleotide)

<220>

<223> Synthetic construct

<400> 408

atgatgggtg	atcccaatgg	caatgaatcc	agtgtacat	acttcaccc	aataggcctc	60
cctggtttag	aagaggctca	gttctgggtg	gccttcccat	tgtgtccct	ctaccttatt	120
gctgtgctag	gtaacttgac	aatcatctac	attgtgcgga	ctgagcacag	cctgcatgag	180
cccatgtata	tatttctttg	catgttttca	ggcattgaca	tcctcatctc	cacctcatcc	240
atgcccacaa	tgctggccat	cttctgggtc	aattccacta	ccatccagtt	tgatgcttgt	300
ctgctacaga	tgtttgccat	ccactcctta	tctggcatgg	aatccacagt	gctgctggcc	360
atggcttttg	accgctatgt	ggccatctgt	caccactgc	gccatgccac	agtacttacg	420
ttgcctcgtg	tcacacaaat	tggtgtggct	gctgtggtgc	ggggggctgc	actgatggca	480
ccccttctctg	tcttcatcaa	gcagctgccc	ttctgcccgt	ccaatatcct	ttccatttcc	540
tactgcttac	accaagatgt	catgaagctg	gcctgtgatg	atatccgggt	caatgtcgtc	600
tatggcctta	tcgtcatcat	ctccgccatt	ggcctggact	cacttctcat	ctccttctca	660
tatctgctta	ttcttaagac	tgtgttgggc	ttgacacgtg	aagcccaggc	caaggcattt	720
ggcacttgcg	tctctcatgt	gtgtgctgtg	ttcatattct	atgtaccttt	cattggattg	780
tccatgggtg	atcgcttttag	caagcggcgt	gactctccgc	tgcccgtcat	cttggccaat	840
atctatctgc	tggttccctcc	tgtgtctaac	ccaattgtct	atggagtga	gacaaaggag	900
attcgacagc	gcaccccttg	acttttccat	gtggccacac	acgcttcaga	gccc	954

<210> 409
 <211> 959
 <212> DNA
 <213> Unknown (H38g258 nucleotide)

<220>
 <223> Synthetic construct

<400> 409
 atgtcttcca gactaatgaa tgtgttcagc atggaaacta tcaattttgt tagctgcctt 60
 atcctcatgg gctttccctc aagcccagaa atgcagctcc tctacttcgg tctctctca 120
 gtagcctata ctctcaccac gatgggaaat gcagccattg tctgtgctgt gtggtaggac 180
 cagcaccttc acactcccat gtacaccctc ttgggaaatt tctctctcct ggaaatatgt 240
 tatgttactg caactaaact gctggccaac ttctcttcca caagcaagtc catctcatc 300
 atgagttggt ttgcacagtt ctactttctc tctttggggt atgatgaggg cttcttctct 360
 tgcatacagg cctttgacag gtatcttgcc atctgccgcc ctctacgtta tccatgcac 420
 atgactaaac aagtatgcac tggcctcatc atttttgcatt ggtcatgtgt ctttgaatc 480
 ttcttaactc tgggtgattct catttcacag ctatcctact gtggcccaaa tattatcaac 540
 cattttatct gtgatcccg cccattgaag atgctgtcct gttctgaaga catcatcatc 600
 acccagctca ttactccac attcaattct gtcttcataa ttggcacctt tctctttatc 660
 ctttgttctt atgctctggt gattctgggt ataatacggg tgccttcaga ggctggcaaa 720
 cgaaaagctt tctccacttg tgcctctcat ttggcagttg tcaccttatt ttatggctct 780
 atcatggtga tgtatgtag tcctggatca gcacaccag taaaaatgaa aaaatcatta 840
 ccttgttctt ttctgtgata acaccactct gtaatcctct aatatatagt ctcaggaaca 900
 aagagatgaa agattatctg aggaaaatct tcaggactgg aaaagatgtt aataaaata 959

<210> 410
 <211> 926
 <212> DNA
 <213> Unknown (H38g259 nucleotide)

<220>
 <223> Synthetic construct

<400> 410
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 ctgcagcctt ttctcttcgt tgttttcctt accatctact tcatcagtggt ggctgggaat 120
 ggagccattc tgatgattgt catctctgat cctagactcc attcccctat gtatttcttc 180
 ctgggaaacc tgcctgcct ggacatctgc tactccagcg taacactgcc aaaaatgctg 240
 cagaacttcc tctctgcaca caaagcaatt tctttcttgg gatgcataag ccaactccat 300
 ttcttccact tcttgggcag cacagaggcc atgttggtgg ccgtgatggc atttgaccgc 360
 tttgtggcta ttgcaagcc acttogetac actgtcatta tgaacctca gctctgtacc 420
 cagatggcca tcacaatctg gatgattggt tttttccatg ccctgctgca ctccctaattg 480
 acctctcgct tgaacttctg tggttctaac cgtatctatc acttcttctg tgatgtgaag 540
 ccattgctaa agctgagctt aatcagtggt tgcacagtg tgcacaggg acaatcgcca 600
 tgggcccctt ctttctcaca ttactctctt atttctacat tatcaccat ctcttcttca 660
 agactcattc ttttagcatg ctccgcaaag cactgtccac ttgtgcctcc cacttcatgg 720
 tagttattct tttgtatgca cctgttctct tcacctatat tcatcatgcc tcagggacct 780
 ccatggacca ggaccggatc actgccatca tgtatactgt ggtcactcca gtactaaacc 840
 cactgatcta cactttgagg aacaaggag tgaaagggc ctttaataga gcaatgaaaa 900
 ggtggctttg gcctaaagaa atcttg 926

<210> 411
 <211> 994
 <212> DNA
 <213> Unknown (H38g260 nucleotide)

<220>
 <223> Synthetic construct

<400> 411

atggaaagcg	agaacagaac	agtgataaga	gaattcatcc	tccttcggtt	gacccagttt	60
cgagatattt	agctcctggt	ctttgtgcta	gttttaatat	tctacttctt	catcctccct	120
ggaaattttc	tcattatttt	caccataagg	tcagaccctg	ggctcacagc	ccccctctat	180
ttatttctgg	gcaacttggc	cttcctggat	gcacccctact	ccttcattgt	ggctcccagg	240
atgttggtgg	acttcctctc	tgagaagaag	gtaatctcct	acagaggctg	catcactcag	300
ctctttttct	tgcacttcct	tggaggagg	gagggattac	tccttggtgt	gatggccttt	360
gaccgctaca	tcaccatctg	cctgcctctg	cagtattcaa	ctgtcatgaa	ctctagagcc	420
tgctatgcaa	tgatgttggc	tctgtggctt	gggggttttg	tccactccat	tatccagggtg	480
gtcctcatca	tccgcttgcc	tttttgtggc	ccaaaccagc	tggacaactt	cttctgtgat	540
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ttcaatagtg	gacctgatgc	actcatgtgc	ttctctggac	ttctggcctc	ctatgcagtc	660
attctttgtc	gcatacagag	gtcttcttct	gaggcaaaaa	acaaggccat	gtccacatgc	720
accacccata	tcattgttat	attcttctatg	tttggacctg	gcattcttcat	ctacacgtgc	780
cccttcaggg	ctttcccagc	cgacaagggtg	gtttctctct	tccacacagt	gattcttctt	840
ttgttgaatc	ctgtcattta	tacccttcat	aaccaggaag	tgaaagcttc	catgaaaaag	900
gtgtttaata	aacacatagc	ctgaaaaagg	gcaaaaaaaa	aaagaagaaa	aatagactgt	960
agaattttat	ctgaaattga	tttgtttatt	tcca			994

<210> 412

<211> 945

<212> DNA

<213> Unknown (H38g261 nucleotide)

<220>

<223> Synthetic construct

<400> 412

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gacatccctg	aactgcattt	cttggttttt	attgtattca	ctgctgtcta	tgtcttcate	120
atcataggga	atatgctgat	tattgttagca	gtggtttagct	cccagaggct	ccacaaaccc	180
atgtatat	tcttgggcaa	tctgtccttc	ctggatattc	tctacacctc	cgcagtgatg	240
ccaaaaatgc	tggagggtct	cctgcaagaa	gcaactatct	ctgtggctgg	ttgcttgctc	300
cagttcttta	tcttcggctc	tctagccaca	gctgaatgct	tactgctggc	tgtcatggca	360
tatgaccgct	acctggcaat	ttgttaccca	ctccactacc	cactcctgat	ggggcccaga	420
cggtagatgg	ggctgggtgg	cacaacctgg	ctctctggat	ttgtggtaga	tggactgggt	480
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gactttatgc	ttttcgtggg	cctggcttgc	tccgatccca	gagtggtcca	ggtgacaact	600
ctcattctgt	ctgtgttctg	cctcactatt	ccttttggac	tgattctgac	atcttatgcc	660
agaattgtgc	tggcagggtc	cctgagttct	gctggggcaa	gcaggagaag	ggctttctcc	720
acatgctcct	cccacctagc	tgtagtgaac	acattctatg	gaacgctcat	gatcttttat	780
gttgcaacct	ctgctgtcca	ttcccagctc	ctctccaagg	tcttctccct	gctctacact	840
gtggtcaccc	ctctcttcaa	tcctgtgatc	tataccatga	ggaacaagga	ggtgcatcag	900
gcacttcgga	agattctctg	tatcaaacaa	actgaaacac	ttgat		945

<210> 413

<211> 936

<212> DNA

<213> Unknown (H38g262 nucleotide)

<220>

<223> Synthetic construct

<400> 413

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gacctccagg	gcttgctctt	ctctgtcttt	ctcactatct	acctgctgac	cgtggcaggc	120
aatttctctc	ttgtgggtgct	ggtctccact	gatgctgccc	tccagtcctc	tatgtacttc	180
ttcctgcgca	ccctctcggc	cttgaggatt	ggctatacgt	ctgtcacggg	ccccctgcta	240
cttcaccacc	tccttactgg	cggcgccac	atctctcgct	ctggatgtgc	tctccagatg	300
ttcttcttcc	tcttcttttg	cgccacggag	tgctgcctcc	tggcagccat	ggcctatgac	360
cgtatgcag	ccatctgtga	acccctccgc	taccactg	tgctgagcca	ccgggtgtgt	420
ctacagctag	ctgggtcggc	gtgggcctgt	gggggtgctg	tggggctggg	ccacaccct	480

ttcatcttct	ctttgccctt	ctgcgccccc	aataccatcc	cgcagttctt	ctgtgagatc	540
cagcctgtcc	tgcagctggt	atgtggagac	acctcgctta	atgaactgca	gattatcctg	600
gcaacagccc	tcctcatcct	ctgccccttt	ggcctcatcc	tgggctccta	cgggcgatc	660
ctcgttacca	tcttcgggat	cccattctgtt	gcgggccgcc	gcaaggcctt	ctccacctgc	720
tcctccacc	tgatcgtggt	ctccctcttc	tatggcaccg	cactctttat	ctatatcgc	780
cctaaggcca	gctacgatcc	ggccactgac	cctctggtgt	ccctcttcta	tgctgtggtc	840
acccccatcc	tcaaccccat	catctacagc	ctgcggaaca	cagaggtcaa	agctgccta	900
aagagaacca	tccagaaaac	ggtgcctatg	gagatt			936

<210> 414

<211> 948

<212> DNA

<213> Unknown (H38g263 nucleotide)

<220>

<223> Synthetic construct

<400> 414

atggttaacc	aaagctcccc	catgggcttc	ctccttctgg	gcttctctga	acaccagca	60
ctggaaagga	ctctctttgt	ggttgtcttc	acttctacc	tcttgaccct	ggtgggcaac	120
acactcatca	tcctgctgtc	tgtactgtac	cccaggctcc	actctccaat	gtactttttc	180
ctctctgacc	tctccttctt	ggacctctgc	tttaccacaa	gttggtgccc	ccagatgctg	240
gtcaacctct	ggggcccaaa	gaagaccatc	agcttctctg	gatgctctgt	ccagctcttc	300
atcttctctg	ccctggggac	cactgagtgc	atcctctga	cagtgatggc	ctttgaccga	360
tacgtggctg	tctgccagcc	cctccactat	gccaccatca	tccacccccg	cctgtgctgg	420
cagctggcat	ctgtggcctg	ggttatgagt	ctggttcaat	cgatagtcca	gacaccatcc	480
accctccact	tgcccttctg	tcctccaccag	cagatagatg	actttttatg	tgagggtccca	540
tctctgatcc	gactctcctg	tggagatacc	tcctacaatg	aaatccagtt	ggctgtgtcc	600
agtgtcatct	tcgtgggtgt	gcctctcagc	ctcatccttg	cctcttatgg	agccactgcc	660
caggcagtg	tgaggattaa	ctctgccaca	gcattggagaa	aggccttttg	gacctgtctc	720
tcctatctca	ctgtgggtcac	ctcttctac	agctcagtc	ttgctgtcta	cctccagccc	780
aaaaatccgt	atgcccaagg	gaggggcaag	ttctttggtc	tcttctatgc	agtgggcact	840
ccttcaacta	accctctcgt	atacacctg	aggaacaagg	agataaagcg	agcactcagg	900
aggttactag	ggaaggaaag	agactccagg	gaaagctgga	gagctgct		948

<210> 415

<211> 954

<212> DNA

<213> Unknown (H38g264 nucleotide)

<220>

<223> Synthetic construct

<400> 415

atgaagagcg	aactgaacag	gaattactca	gaggtgacag	agtttattct	gctgggattc	60
agaacatcgc	cagaagcaca	gattctctta	ttcttctctg	tcttgcttat	ctacatgggc	120
attgtgttga	gaaatctcag	catgttagtt	gtcattgaaa	tagactccag	acttcacaca	180
cctgtgtatt	tctttctcag	aaatttgctc	tatttgatc	tccgctactc	cacagttatt	240
gcttccaaaa	ctgactactt	tattttccaa	ggaaaagaaa	atttcttaca	atgggtgagc	300
aacacagttg	ttttcttttg	ctctctttgt	tgggactgaa	ggtttttttc	tggatatgat	360
ggcatatgat	cgcttctcag	ctatttgctc	acctttcttc	tatactgtat	gtatgtctca	420
gcaagcttgt	gtttgttttg	tgggtggctc	ctctatctgt	ggatgcatca	actccatgat	480
acaaacaggt	tttaccttca	gtttgcattt	ctgtggagaa	aacagattag	agcacttttt	540
ctgtgatgtc	tcagtcatga	tcaagatctc	atgtattgac	atccttgtga	atgaggtagt	600
actgtttatt	ctctctgtct	tcattaccac	caccacaact	gtcattcttg	cttcttatgt	660
gcatactctc	tccactgtcc	tgaagattct	ctcaaccac	ggcagaagga	agactttctc	720
cacttgacgc	tctcacatca	ctgtgggtgag	tttattctat	ggaactgtat	tcttcatgta	780
tgcccaacct	ggggccatct	ccaaagagca	aggttatagt	tgtattctaa	actcttgtca	840
tccttatgtt	aaatatctga	tttatagctc	aagaaatagg	tgcaaaatgc	tttgaaaagg	900
acattgataa	gaaaaaatatc	ttttcattgg	cctctagcca	tctataaaac	tata	954

<210> 416
 <211> 531
 <212> DNA
 <213> Unknown (H38g265 nucleotide)

<220>
 <223> Synthetic construct

<400> 416
 atgagcccaa gaatgtgcct ttcatttctg gctgttgect ggacccttgg tgtcagtcac 60
 tccctgttcc aactggcatt tcttgtaaat ttacccttct gtggccctaa tgtgttggac 120
 agcttctact gtgaccttcc tcggcttctc agactagcct gtaccgacac ctacagattg 180
 cagttcatgg tcaactgttaa cagtgggttt atctgtgtgg gtactttctt catacttcta 240
 atctcctaca tcttcatcct gtttactgtt tggaaacatt cctcaggtgg ttcattccaag 300
 gccctttcca ctctttcagc tcacagcaca gcggctcctt tgttctttgg tccacctatg 360
 tttgtgtata catggccaca ccctaattca cagatggaca agtttctggc tatttttgat 420
 gcagttctca ctcttttctt gaatccagtt gtctatacat tcaggaataa ggagatgaag 480
 gcagcaataa agagagtatg caaacagcta gtgatttaca agaagatctc a 531

<210> 417
 <211> 965
 <212> DNA
 <213> Unknown (H38g266 nucleotide)

<220>
 <223> Synthetic construct

<400> 417
 atggaagcag aaaaccttac agaattatca aaatttctcc tcctgggact ctccagatgat 60
 cctgaactgc agcccgctct ctttgggctg ttccctgtcca tgtacctggc cacggtgctg 120
 gggaacctgc tcatcattct ggccgtcagc tctgactccc acctccacac ccccatgtac 180
 ttcttctctt ccaacctgtc ctttgttgac atctgtttca tctccaccac agtccccaag 240
 atgctagtga gcattccaggc acggagcaaa gacatctcct acatgggggtg cctcactcag 300
 gtgtattttt taatgatgtt tgctggaatg gatactttcc tactggccgt gatggcctat 360
 gaccgggttg tggccatctg ccacccactg cactacacgg tcatcatgaa cccctgcctc 420
 tgtggcctcc tggttctggc atcttgggtc atcattttct gggtctccct gggtcatatt 480
 ctactgatga agagggttgac cttctccaca ggcactgaga ttccgcattt cttctgtgaa 540
 ccggctcagg tcttcaaggt ggccgtgctct aacacctcc tcaataacat tgtcttgtat 600
 gtggccacgg cactgctggg tgtgtttcct gtagctggga tctctttctc ctactctcag 660
 attgtctcct ccttaatggg aatgtcctcc accaaggcca agtacaaagc cttttccacc 720
 tgtggatctc acctctgtgt ggtctccttg ttctatggaa caggacttgg ggtctatctg 780
 agttctgtct tgacctatc ttcccagagc agctccaccg cctcagtgat gtacgccatg 840
 gtcaccccca tgctgaacct cttcatctac agcctgagga acaaggatgt gaagggggcc 900
 ctggaaagac tctcagcag ggccgactct tgtccatgac aaatcagggc ctcagaacta 960
 agagg 965

<210> 418
 <211> 967
 <212> DNA
 <213> Unknown (H38g267 nucleotide)

<220>
 <223> Synthetic construct

<400> 418
 tacacagagc cagagaatct cacaggtgtc ttagaattcc tgtccttggg actcccagat 60
 gatccagaac tgcagcccgt cctcttttgg ctgttctgt ccatgtacct ggtcatgggtg 120
 ctggggaacc tgcctatcat tctggccgtc agctctgact cccatctcca cagccccatg 180
 tacttcttcc tctccaacct gtccttggct gacatcggtt ttgcctctac tactgtcccc 240
 aagatgattg tggacatcca ggctcatagt agactcatct cttacgtggg ctgcctgact 300
 cagatgtcct ttttgatctt tttcgcattg atggaaagtc tgcctctgat tgtgatggcc 360

tatgaccggt	tctgtggccat	ctgtcacccc	ctgcactacc	aagtcacat	gagccccaga	420
ctctgtggct	tcttagtttt	ggtgtctttt	tttcttagcc	ttttggactc	tcagctgcac	480
aatttgattg	tgttacaact	tacctgttc	aacgatgtgg	aaatctctaa	ttttttctg	540
tgacccttct	taactttctca	agctggcctg	ttctgacacc	tccattaata	acatggttgt	600
atattttatt	ggtgccatat	ttggttttct	ccctctctta	gggaccttt	tctcttacta	660
taaaattggt	tcctccattc	tgagagttct	ctcttcagg	gggaagtata	aagccttctc	720
cacctgcagc	tctcacctgt	cagttgtttg	cttactttat	ggaacagccc	ttggagggtg	780
cctcagttca	gctgtgtccc	tttctccag	gaagggtgca	gtggcctcag	taatgtacat	840
ggtggtcacc	cccatgctga	accccttcat	ctacagcctg	agaaacaggg	acattcaaag	900
tgccctgcag	aggctgcacg	gcagaataat	gtaatctcct	tatctgttgc	atctttttg	960
tagtatt						967

<210> 419

<211> 924

<212> DNA

<213> Unknown (H38g268 nucleotide)

<220>

<223> Synthetic construct

<400> 419

atgagacaga	taaatacagac	acaagtgaca	gaattcctcc	ttctgggact	ctctgatggg	60
ccacacaccg	agcagctgct	atztatcgta	ttattgggtg	tctacctgg	cactgtgctt	120
ggaaatctgc	ttctaatactc	ccttggttcat	gttgactccc	aacttcacac	acccatgtat	180
ttttttctct	gcaacttgct	tctggctgac	ctctgtttct	ctaccaacat	agttcctcag	240
gcactagtcc	acctgctttc	cagaaagaag	gtcattgcat	tcacactttg	cgcagctcga	300
cttctctttt	tcctcatttt	tgggtgtacc	cagtgcgccc	ttcttgagct	gatgtcctat	360
gatcgctatg	ttgcaatctg	caatcctctg	cgttaccctg	acatcatgac	ctggaaagtg	420
tgtgtccagc	tggcaacagg	atcatggacc	agtggtcattc	tgggtgtctgt	gtagacaccc	480
accttcacac	tgaggctacc	ctaccgaggc	agtaacagca	ttgctcattt	cttttgtgag	540
gcccctgcac	tattgatctt	agcatccaca	gacacccatg	catcagagat	ggccattttt	600
cttacggggg	ttgtgattct	cctcatacct	gtttttctga	ttctgggtatc	ctatggccgt	660
atcatagtaa	ctgtggtcaa	gatgaagtca	actgtgggga	gtctcaaggc	attttctacc	720
tgtggctccc	acctcatggt	ggtcatactt	ttttatggat	cagcaattat	cacttacatg	780
acacccaagt	cttccaaaca	gcaggaaaaa	tcggtgtctg	ttttctatgc	aatagtgtg	840
cccatgctga	atccccctcat	ctatagcctg	agaaacaagg	atgtgaaggc	agctctgagg	900
aaagttagcca	caaggaattt	ccca				924

<210> 420

<211> 954

<212> DNA

<213> Unknown (H38g269 nucleotide)

<220>

<223> Synthetic construct

<400> 420

atgcccatac	ttatggctat	aggaaactgg	acagaaataa	gtgaatttat	cctcatgagc	60
ttctcttccc	tacctactga	aatacagtc	ttgctcttcc	tgacatttct	aactatctat	120
ttggttactc	tgaaggga	cagcctcatc	attctgggtta	ccctagctga	ccccatgcta	180
cacagcccca	tgtacttctt	cctcagaaac	ttatctttcc	tggagattgg	cttcaacct	240
gtcattgtgc	ccaaaatgct	ggggaccctg	cttgcccagg	acacaacccat	ctccttctt	300
ggctgtgcca	ctcagatgta	tttcttcttc	ttctttgggg	tagctgaatg	cttctcctg	360
gctaccatgg	catatgaccg	ctatgtggcc	atctgcagtc	ccttgcaact	cccagtcac	420
atgaaccaaa	ggacacgggc	caaactggct	gctgcttctt	ggttcccagg	ctttctctgta	480
gctactgtgc	agaccacatg	gctcttcagt	tttccattct	gtggcaccaa	caagggtgaac	540
cacttcttct	gtgacagccc	gcctgtgctg	aagctgggtct	gtgcagacac	agcactgttt	600
gagatctacg	ccatcgtcgg	aaccattctg	gtggtcatga	tcccctgctt	gctgatcttg	660
tgttcttata	ctcgcattgc	tgctgctatc	ctcaagatcc	catcagctaa	agggaagcat	720
aaagccttct	ctacgtgtgc	ctcacacctc	cttggtgtct	ctcttttcta	tatatcttct	780
agcctcacct	acttctggcc	taaatcaaat	aattctcctg	agagcaagaa	gttggttatca	840

ttatcctaca ctgttgtgac tcccatgttg aaccccatta tctacagctt gagaaatagc 900
gaggtgaaga atgccctcag caggaccttc cacaaggtcc tagccctcag aaac 954

<210> 421

<211> 780

<212> DNA

<213> Unknown (H38g270 nucleotide)

<220>

<223> Synthetic construct

<400> 421

gcccaccttt	ccttcctgga	cctcagtttc	accaccagct	ccatccccc	gctgctctac	60
aaccttaatg	gatgtgacaa	gaccatcagc	tacatgggct	gtgccatcca	gctcttctctg	120
ttcctgggtc	tgggtgggtg	ggagtgcctg	cttctggctg	tcattggccta	tgaccgggtg	180
gtggctatct	gcaagcccc	gcaactacatg	gtgatcatga	acccagggct	ctgccggggc	240
ttgggtgtcag	tgacctggag	ctgtgggggtg	gccaaactcct	tggccatgtc	tcctgtgacc	300
ctgcgcttac	cccgtgtg	gcaccacgag	gtggaccact	tcctgcgtga	gatgccccgc	360
ctgatccgga	tggcctgcgt	cagcactgtg	gccatcgaag	gcaccgtctt	tgtcctggcg	420
gtgggtgttg	tgctgtcccc	cttgggtgtt	atcctgctct	cttacagcta	cattgtgagg	480
gctgtgttac	aaattcggtc	agcatcagga	aggcagaagg	ccttcggcac	ctgcggctcc	540
catctcactg	tgggtctccct	tttctatgga	aacatcatct	acatgtacat	gcagccagga	600
gccagttctt	cccaggacca	gggcatgttc	ctcatgctct	tctacaacat	tgtcaccccc	660
ctcctcaatc	ctctcatcta	caccctcaga	aacagagagg	tgaagggggc	actgggaagg	720
ttgcttctg	ggaagagaga	gctaggaaag	gagtaaaggc	atctccacct	gacttcactt	780

<210> 422

<211> 985

<212> DNA

<213> Unknown (H38g271 nucleotide)

<220>

<223> Synthetic construct

<400> 422

gaagagatat	tatgaataat	atcccagcat	gtacacacag	gggtgtgtaca	gattaagaac	60
tgcagcccat	cctctttggg	ctgttctctg	ccatgtgcct	ggtcattgggtg	ctgggggaacc	120
ttctcatcat	cctggccgct	agctctgact	cccacctcca	cacccccacg	tactttttcc	180
tctccaacct	gtccttggct	gacatcggtt	tcccctccac	cactgtcccc	aagatgattg	240
tggacatcca	gtctcacagc	agagtcattc	cctatgcggg	ctgcctgact	cagatatctc	300
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ttgtggccat	ctgtcaccct	ctggattatc	cagtcattcat	gaacccatgt	ttctgtgggt	420
tcctggtttt	gttgtctttt	ttttctcagt	cttttagact	tccagctgca	caattggatt	480
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caactcccc	accttgccctg	ttgtgacacc	ttcaccaaca	acatagtcatt	gtattttcctt	600
gctgccatac	ttggttttct	tcccatctcg	gggatctttt	ctcttactat	aaaattgttt	660
cctccattct	gaaggtttca	tcattcagggtg	ggaagtataa	agccttctcc	acctgtgggt	720
ctcacctgtc	agttgtttgc	ttattttatg	gaacagccct	tggagggtac	ctcagttcag	780
acatgtcctc	ttatcccaga	aagggtgcag	tggcttcagt	gatgtacaca	gtgggtcgcc	840
ccatgctgaa	cccgttcac	tacagcctga	gaaaaagga	cattaaaagt	gccctgcagc	900
agctgcatgg	cagaatagtc	taatctcatg	atcttattat	cggttccatt	cttttagcatg	960
ggttggaaaa	ggcagcaagg	tcaaa				985

<210> 423

<211> 963

<212> DNA

<213> Unknown (H38g272 nucleotide)

<220>

<223> Synthetic construct

<400> 423

atggaatctc	ctaatacacac	tgatgttgac	ccttctgtct	tcttctctct	gggcatccca	60
ggtctggaac	aatttcattt	gtggctctca	ctccctgtgt	gtggcttagg	cacagccaca	120
attgtgggca	atataactat	tctggttggt	gttgccactg	aaccagtctt	gcacaagcct	180
gtgtaccttt	ttctgtgcat	gctctcaacc	atcgacttgg	ctgcctctgt	ctccacagtt	240
cccaagctac	tggctatctt	ctggtgtgga	gccggacata	tatctgcctc	tgcctgcctg	300
gcacagatgt	tcttcattca	tgccttctgc	atgatggagt	ccactgtgct	actggccatg	360
gcctttgatc	gctacgtggc	catctgccac	ccactccgct	atgccacaat	cctcactgac	420
accatcattg	cccacatagg	ggtggcagct	gtagtgcgag	gctccctgct	catgctccca	480
tgtcccttcc	ttattgggcg	tttgaacttc	tgccaaagcc	atgtgatcct	acacacgtac	540
tgtgagcaca	tggctgtggt	gaagctggcc	tgtggagaca	ccaggcctaa	ccgtgtgtat	600
gggctgacag	ctgcaactgt	ggtcattggg	gttgacttgt	tttgacttgg	tctctcctat	660
gccctaagtg	cacaagctgt	ccttcgcctc	tcaccccatg	aagctcggtc	caaggcccta	720
gggacctgtg	gttcccatgt	ctgtgtcatc	ctcatctctt	atacaccagc	cctcttctcc	780
ttttttacac	accgcttttg	ccatcacggt	ccagtcacata	ttcacattct	tttggccaat	840
gtttatctgc	ttttgccacc	tgtctttaat	cctgtggtat	atggagttaa	gaccaaacag	900
atccgtaaaa	gagttgtcag	ggtgtttcaa	agtgggcagg	gaatgggcat	caaggcatct	960
gag						963

<210> 424

<211> 982

<212> DNA

<213> Unknown (H38g273 nucleotide)

<220>

<223> Synthetic construct

<400> 424

atgacatgga	gtggcggaac	catagtggga	gagtgaagtga	gtttgtgttg	ctggggcttc	60
cctgtcctcg	cgccactaca	ggtactattg	tttgcccttt	tgtgtctggc	ctatgtgttg	120
gtgtgtactg	agaacacact	catcattatg	gcaattagga	accattccac	cctccacaaa	180
cccatgtact	tttttctagc	taatattgtc	tttctggaga	tctggtatgt	cactgtcact	240
attcccaaga	tgtctgtctg	ctttgttgga	tccaacagg	atcatggaca	gctaattctc	300
tttgagggat	gcatgacaca	gctctacttt	ttccttggtc	tgggtgtcac	tgagtgtgtc	360
cttctcgtcg	ttatggccta	tgatcgctat	atggccatct	gctatcctct	ccactaccca	420
gtcattgtca	gtggccggct	gtgtgtgcag	atggctgctg	gctcttgggc	tggagggttt	480
ggcatctcca	tggtcaaagt	ttttcttatt	tctggcctct	cttactgtgg	ccccaacatc	540
atcaaccact	ttttctgtga	tgtctctcca	ttgtccaacc	tctcatgcac	tgatatgtcc	600
acagcagagc	ttacagattt	catcctggcc	atttttatct	ttctagggcc	actctctgtc	660
actggggcct	cctatgtggc	cattactggt	gctgtgatgc	acataccttc	ggctgtctgga	720
cgctataagg	ccttttccac	ctgtgcctct	catctcactg	ttgtgataat	cttctatgca	780
gccagtatct	tcacttatgc	tggccaaaag	gcactctcag	cttttgacac	caacaagttg	840
gtctctgtac	tgtatgctgt	cattgtacca	ttgtcgaatc	ccatcattta	ctgectgcgc	900
aatcaagagg	tcaagagagc	cctatgctgt	actctgcacc	ctgtaccagc	accaggatcc	960
tgaccccaag	aaagctagca	ga				982

<210> 425

<211> 936

<212> DNA

<213> Unknown (H38g274 nucleotide)

<220>

<223> Synthetic construct

<400> 425

atggaagcag	gaaaccaaac	aggattttta	gagtttatcc	ttctcggact	ctctgaggat	60
ccagaactac	agccgttcat	atttgggctg	ttcctgtcca	tgtacctggt	gacggtgctg	120
ggaaaacctgc	tcatactcct	ggccatcagc	cttgactccc	acctccacac	ccccatgtac	180
ttcttctctc	ccaacctgtc	ctgggttgac	atctgtttca	gcacttgcac	cgtccccaag	240
atgctggtga	acatccagac	cgagaacaaa	gccatctcct	acatggactg	cctcacacag	300
gtctattttc	ccatgttttt	tcctattctg	gacacgctac	tcctgaccgt	gatggcctat	360

gaccggtttg	tggtgtgtctg	ccaccctctg	cactatatga	tcatcatgaa	ccccacctc	420
tgtggcctcc	tggtttttgt	cacctggctc	attgggtgtca	tgacatccct	cctccatatt	480
tctctgatga	tgcatctaata	cttctgtaaa	gattttgaaa	ttccacattt	tttctgcgaa	540
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tttatgacgg	gtgtgtctggg	cgtttttccc	ctccttgggg	tcattttctc	ttattcacga	660
attgcttcat	ccataaggaa	gatgtcctca	tctgggggaa	aacaaaaagc	actttccacc	720
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acttctgcgg	tgactcactc	ttcccagaaa	atctccgtgg	cctcgggtgat	gtacactgtg	840
gtcaccacca	tggtgaaccc	cttcatctac	agcctgagga	acaaggatgt	gaaggaggcc	900
ctggggagtc	tcctcagcag	ggcagcctct	tgtttg			936

<210> 426

<211> 960

<212> DNA

<213> Unknown (H38g275 nucleotide)

<220>

<223> Synthetic construct

<400> 426

atgactgctt	gcaatgcctc	acagggccac	ccttctttct	tcattctcca	aggaattcct	60
ggcatggagg	acaaacacag	atggatatct	atccccctct	cctccatgta	tttcattatg	120
gtgcttgagg	actgcaccat	cctcctcacc	atctccacag	agcgtctcct	gcacaaaccc	180
atgttcctgc	tcctctgtct	gttggccctc	acagacctgg	gcatgtctac	aaccaccatt	240
cccaagggtgc	tgtgcatttt	ctgggttggc	cagagtgaga	tcagctatga	aggatgcctg	300
gttcagctgt	tcctcatcca	ctccatctct	gccatgcagt	cagctgtcct	gatgaccatg	360
gcctttgacc	actatgtggc	catctgcaag	cccttgcgct	atgccaccat	cctttccaat	420
agttgcactg	gactcattgg	cttagtgagt	ttgggtgagag	ctatcctctt	tattctcccc	480
atgcccaccc	tccttcagca	aatgccctat	catgccaatc	gtgtcatccc	caccacctcc	540
tgtgagcaca	tggtgtgtgt	gaagatgggt	tgtgtagata	ctacagtcaa	caggatatat	600
ggcctgggtg	tggtccttgt	ggttgctggc	tagatctctc	agctattgct	tcattcttatg	660
tgctaatacat	ccaggctata	atgcattctc	cttctaagga	agcccaccac	aaagcagtca	720
acacctgcac	cacacacatc	tgtgtcatgc	ttatttctta	tactccctca	cttttctctt	780
ttctcgctca	ccgctttggc	caaggcatte	caccccatgt	ccacatcatt	cttggcaacc	840
tttacttctc	tgtacctcca	atgctcagtc	ctataattta	tggagtgaag	actaaggagt	900
tctgggacaa	agtgaccaa	taggggtgct	ggaaagaaga	accacacaacc	actgaccatg	960

<210> 427

<211> 948

<212> DNA

<213> Unknown (H38g276 nucleotide)

<220>

<223> Synthetic construct

<400> 427

atggagctct	ggaacttcac	cttgggaagt	ggcttcattt	tggtggggat	tctgaatgac	60
agtgggtctc	ctgaactgct	ctgtgctaca	attacaatcc	tatacttggt	ggccctgatac	120
agcaatggcc	tactgtctct	ggctatcacc	atgggaagccc	ggctccacat	gcccattgtac	180
ctcctgcttg	ggcagctctc	tctcatggac	ctcctgttca	catctgttgt	cactcccaag	240
gcecttgagg	actttctgcg	cagagaaaac	accatctcct	ttggaggctg	tgcccttcag	300
atgttccttg	cactgacaat	gggtggtgct	gaggacctcc	tactggcctt	catggcctat	360
gacaggtatg	tggtcatttg	tcctcctctg	acatacatga	ccctcatgag	ctcaagagcc	420
tgtggctca	tggtggccac	gtcctggatc	ctggcatccc	taagtgcctc	aatatatacc	480
gtgtatacca	tgactatccc	cttctgcagg	gcccaggaga	tcaggcatct	tctctgtgag	540
atcccacact	tgctgaaggt	ggcctgtgct	gatacctcca	gatatgagct	catggtatat	600
gtgatgggtg	tgaccttctc	gattccctct	cttgctgcta	tactggcctc	ctatacacaa	660
attctactca	ctgtgctcca	tatgccatca	aatgagggga	ggaagaaagc	ccttgtcacc	720
tgctcttccc	acctgactgt	ggttgggagt	ttctatggag	ctgccacatt	catgtatgtc	780
ttgcccagtt	ccttcacacg	caccagacaa	gacaacatca	tctctgtttt	ctacacaatt	840
gtcactccag	ccctgaatcc	actcatctac	agcctgagga	ataaggaggt	catgcggggcc	900

ttgaggaggg tcctgggaaa atacatgctg ccagcacact ccacgctc

948

<210> 428

<211> 936

<212> DNA

<213> Unknown (H38g277 nucleotide)

<220>

<223> Synthetic construct

<400> 428

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ccggagctgc	agcccatcct	cttcatgctg	ttcctgtcca	tgtacctggc	cacaatgctg	120
gggaacctgc	tcattcatcct	ggccgtcaac	tctgactccc	acctccacac	ccccatgtac	180
ttcctcctct	ctatcctgtc	cttgggtcgac	atctgtttca	cctccaccac	gatgcccacg	240
atgctgggtga	acatccaggc	acagggtcaa	tccatcaatt	acacaggctg	cctcacccaa	300
atctgctttg	tcctgggttt	tggtggattg	gaaaatggaa	ttctgggtcat	gatggcctat	360
gategatttg	tggccatctg	tcaccactg	aggtacaatg	tcattcatgaa	ccccaaactc	420
tgtgggctgc	tgcttctgct	gtccttcctc	gtagtgctcc	tggatgctct	gctgcacacg	480
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ctagctcata	ttctcaagct	cgctgtttct	gatgtcctca	tcaataacat	cctgggtgat	600
ttgggtgacca	gcctgtttagg	tggtgttctc	ctctctggga	tcattttctc	ttacacacga	660
attgtctcct	ctgtcatgaa	aattccatca	gctgggtggaa	agtataaagc	tttttccatc	720
tgcggttcac	atttaategt	cgtttccttg	ttttatggaa	cagggttttg	ggtgtacctt	780
agttctgggg	ctaccactc	ctccaggaag	ggtgcaatag	catcagtgat	gtataccgtg	840
gtcaccccca	tgctgaaccc	actcatttac	agcctgagaa	acaaggacat	gttgaaggct	900
ttgaggaaac	taatattctag	gataccatct	ttccat			936

<210> 429

<211> 984

<212> DNA

<213> Unknown (H38g278 nucleotide)

<220>

<223> Synthetic construct

<400> 429

aaaatctcca	atagctccaa	attccaggtc	tctgagttca	tcctgctggg	attcccgggc	60
attcacagct	ggcaaacactg	gctatctctg	cccctggcac	tactgtatct	ctcagcactt	120
gctgcaaaca	ccctcatcct	catcatcatc	tggcagaacc	cttctttaca	gcagcccatg	180
tatatattcc	ttggcatcct	ctgtatggta	gacatgggtc	tggccactac	tatcatccct	240
aagatcctgg	ccatcttctg	gtttgatgcc	aaggttatta	gcctccctga	gtgctttgct	300
cagatttatg	ccattcactt	ctttgtgggc	atggagtctg	gtatcctact	ctgcatggct	360
tttgatagat	atgtggctat	ttgtcaccct	cttcgctatc	catcaattgt	caccagttcc	420
ttaatcttaa	aagctaccct	gttcatgggt	ctgagaaatg	gcttatttgt	cactccagtg	480
cctgtgcttg	cagcacagcg	tgattattgc	tccaagaatg	aaattgaaca	ctgcctgtgc	540
tctaaccctg	gggtcacaaag	cctggcttgt	gatgacagga	ggccaaacag	catttgccag	600
ttggttctgg	catggcttgg	aatggggagt	gatctaagtc	ttattatact	gtcatatatt	660
ttgattctgt	actctgtact	tagactgaac	tcagctgaag	ctgcagccaa	ggccctgagc	720
acttgtagtt	cacatctcac	cctcatcctt	ttcttttaca	ctattgttgt	agtgatttca	780
gtgactcatc	tgacagagat	gaaggctact	ttgattccag	ttctacttaa	tgtgttgac	840
aacatcatcc	ccccctccct	caaccctaca	gtttatgcac	ttcagaccaa	agaacttagg	900
gcagccttcc	aaaagggtgct	gtttgcctt	acaaaagaaa	taagatctta	gagaccttct	960
ccatgatgta	catgaacctc	agct				984

<210> 430

<211> 947

<212> DNA

<213> Unknown (H38g279 nucleotide)

<220>

<223> Synthetic construct

<400> 430

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agtgggtctc	ctgaactgct	ctatgctaca	tttacaatcc	tatacatggt	ggcactgacc	120
agcaatggtc	tgctgctcct	ggccatcacc	atagaagccc	ggctccacat	gcccattgtac	180
ctcctgcttg	ggcagctctc	tctcatggac	ctcctgttca	catctgttgt	cactcccaag	240
gccttgcgga	ctttctgcgc	agagaaaaca	ctatctcctt	tggaggctgt	gcacttcaga	300
tgttcctggc	actgacaatg	ggtagcgctg	aggacctcct	actggccttc	atggcctatg	360
acaggatatgt	ggccatttgt	catcctctga	aatacatgac	cctcatgagc	ccaagagtct	420
gctggatcat	ggtggccaca	tectggatcc	tggcatccct	gattgctata	ggacatacca	480
tgtacactat	gcacctccct	ttctgtgtgt	cctgggaaat	caggcatctg	ctctgtgaga	540
tcccacctct	gctgaagttg	gcctgtgctg	atacctccag	gtatgagctt	ataatatagc	600
tgacagggtgt	gactttctct	ttgtctccca	tttctgccat	tgtggcctcc	tacacactag	660
tcctattcac	tgtgcttctg	atgccatcaa	atgaggggag	gaagaaagcc	cttgtcacct	720
gctcttccca	cctgattgtg	gtcgggatgt	tctatggagc	tgccacattc	atgtatgtct	780
tgcccagttc	cttcacacag	cccaaacaag	acaacatcat	ctctgttttc	tacacaattg	840
tcactccagc	cctgaatcca	ctcatctaca	gcctgaggaa	taaggaggtc	atgctgggct	900
tgaggagggt	cctgggaaaa	tacatactgc	tggcacattc	cacgctc		947

<210> 431

<211> 897

<212> DNA

<213> Unknown (H38g280 nucleotide)

<220>

<223> Synthetic construct

<400> 431

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tacctcttag	ctctcagtgc	caacatcctt	atcctgatca	tcatcaacaa	agaggcagca	120
ctgcaccagc	ctatgtacta	tttcctgggc	atcttggcta	tggcagacat	aggcctggct	180
accaccatca	tgcctaagat	tttggccatc	ttatggttca	atgctaagac	catcagtctc	240
ctggagtgtc	ttgtcagat	gtatgccata	cattgctttg	tggccatgga	atcaagtacc	300
tttgtctgca	tggctattga	tagatatgta	gccatttgtc	gaccgctacg	atatccatca	360
atcatcactg	aatcttttgt	tttcaaagca	aatgggttca	tggcactgag	aaacagcctg	420
tgtctcatct	cagtgcctct	gttggctgcc	cagaggcatt	actgctccca	gaatcaaatt	480
gagcactgtc	tttgttctaa	ccttggagtc	actagcctat	cttgtgatga	tcgaagaatc	540
aatagcatta	accaggctct	tttggcttgg	acactcatgg	gaagtgcact	gggtttgatt	600
attttatcat	atgctctaata	actttactct	gtcctgaagc	tgaactctcc	agaagctgca	660
tccaaggcct	taagtacctg	cacctccac	ctcatcttaa	tccttttctt	ctacacagtc	720
atcattgtga	tttccattac	tcgtagtaca	ggaatgagag	ttcccccttat	tccagttcta	780
cttaatgtgc	tacacaatgt	cattccccct	gcctgaacc	ccatggtata	tgcactcaag	840
aacaaggaac	tcaggcaagg	cttatacaag	gtacttagac	tgggagtga	gggcacc	897

<210> 432

<211> 980

<212> DNA

<213> Unknown (H38g281 nucleotide)

<220>

<223> Synthetic construct

<400> 432

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cggctcctgc	gccactacag	gtactatcgt	ttgcccgta	gtccgcggcc	tatgcgttgg	120
tgctgactga	gaacacactc	atcattatgg	caagtaggaa	ccattccacc	ctccacaaac	180
ccatgtactt	tgttctagct	aatatgtcct	cctctggaga	tctgggtatgt	cactgtcact	240
attcccaaga	tgcttgctgg	ctttgttgga	tccaaacagg	atcatggaca	gctaactctc	300
tttgagggat	gcatgacaca	gctctacttt	ttccttggct	tgggctgcac	tgagtgtgtc	360
cttctcgctg	ttatggccta	tgatcgctat	atggccatct	gctatcctct	ccactaccca	420

gtcattgtca	gtggccggct	gtgtgtgcag	atggctgctg	gctcttgggc	tggaggtttt	480
ggcatctcca	tgggtcaaagt	ttttcttatt	tctggcctct	cttactgtgg	ccccaacatc	540
atcaaccact	ttttctgtga	tgtctctcca	ttgtcacc	tctcatgcac	tgatatgtcc	600
acagcagagc	ttacagattt	cactctggcc	atttttatte	ttctagggcc	actctctgtc	660
actggggcct	cctatgtggc	cattactggg	gctgtgatgc	acacttcttc	ggctgctgga	720
cgctataagg	ccttttccac	ctgtgcctct	catctcactg	ttgtgataat	cttctatgca	780
gccagtatct	tcctctatgc	tcgccaaagg	cactctcagc	ttttgacacc	aacaagttgg	840
tctctgtact	gtatgctgtc	attgtaccat	tgctcaatcc	catcatttac	tgcttgcgca	900
atcaagaggt	caagagagcc	ctatgctgta	ctctgcacct	gtaccagcac	caggatcctg	960
acccaagaa	agctagcaga					980

<210> 433

<211> 998

<212> DNA

<213> Unknown (H38g282 nucleotide)

<220>

<223> Synthetic construct

<400> 433

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tgggagatcc	agctcctcct	cctagtgttt	tctctgtgc	tctatgtggc	aagcattact	120
ggaaacatcc	tcattgtgtt	ttctgtgacc	actgaccctc	acttacactc	ccccatgtac	180
tttctactgg	tcagtctctc	cttcattgac	ttaggagcct	gctctgtcac	ttctcccaag	240
atgatttatg	acctgttcag	aaagcgcaaa	gtcatctcct	ttggaggctg	catcgctcaa	300
atcttcttca	tccacgtcat	tggtggtgtg	gagatgggtg	tgctcatagc	catggccttt	360
gacagttatg	tggccctatt	aagccccctc	actatctgac	cattatgagc	ccaagaatgt	420
gcctttcatt	tctggctgtt	gcctggaccc	ttgttgtcag	tcactccctg	ttccaactgg	480
catttcttgt	taatttacc	ttctgtggcc	ctaattgtgt	ggacagcttc	tactgtgacc	540
ttctcagct	tctcagacta	gcctgtaccg	acacctacag	attgcagttc	atggctcactg	600
ttacacagtg	gtttatctgt	gtgggtactt	tcttcatact	tctaattctc	tacgtcttca	660
tctgttttac	tgtttgga	cattcctcag	gtgggttcac	caaggccctt	tccactcttt	720
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ttctgaatcc	agttgtctat	acattcagga	ataaggagat	gaaggcagca	ataaagagag	900
tatgcaaaca	gctagtgtat	tacaagaaga	tctcataaat	gatacaataa	gcccttctcg	960
ttaaacaatga	tatggcttta	tgtttctttc	tttgatat			998

<210> 434

<211> 840

<212> DNA

<213> Unknown (H38g283 nucleotide)

<220>

<223> Synthetic construct

<400> 434

atgctgctgg	gcaacctggc	catcatcagc	ttcatttgcc	ttgattcccg	ccttcactca	60
cccatgtact	tcttcctctg	caacttctcc	ctcatggaga	tggtgggtcac	ctccactgtg	120
gtacatagga	tgctggcaga	cctgctatcc	actcacaaga	ccatgtccct	ggccaaatgc	180
ctaaccaggt	ctttctttta	cttctccctg	ggctctgcca	acttctctgat	actcatggtc	240
atggcctttg	atcgctacgt	ggccatctgc	caccccctgc	gtacccaac	catcagaaat	300
gggtccagtg	gtgtgaagct	gggtgggtggc	tggtgggtgg	ttgggtttcct	ctccattgtc	360
tctccacac	tcagaaaaac	acgactctgg	ttctgtggcc	ctaacaatcat	cggccactac	420
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atggacctct	tctgtccct	gctctttgtg	ctgaccacca	tgctgcttat	catcctctcc	540
tacatcctca	ttgtgggtgc	agtgtgtcac	atcccttctt	cctctggatg	ccagaaggcc	600
ttctccacct	gtgctctca	cctcacagtg	gtggttctgg	gctatggcag	tgccatcttc	660
atctacgtga	ggcaggcaa	gggccaactcc	acatacctca	acaaggcggt	ggccatgggtg	720
actgcaatgg	taaccctttt	cctcaacccc	ttcatcttca	ccttccggaa	tgagaagggtc	780
aaggaggtca	ttgaggatgt	gactaaaagg	atcttctctg	gagaccacgc	agcctgtagg	840

<210> 435
 <211> 939
 <212> DNA
 <213> Unknown (H38g284 nucleotide)

<220>
 <223> Synthetic construct

<400> 435
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 ccagaggtcc aactagtcct atttgttata tttctatcct tctatttggt catcctacca 120
 ggaaatatcc ttatcatttg caccatcagt ctagaccctc atctgacctc tccatgtgat 180
 ttctgtgttg ctaatctggc ctcccttgat atttgggtact cttccattac agcccctgaa 240
 atgctcatag acttcttctg ggagaggaag ataatttctt ttgatggatg cattgcacag 300
 ctcttcttct tacacttttg tgggggcttcg gagatgttct tgctcacagt gatggccttt 360
 gacctctaca ctgctatctg ccgacccctc cactatgcta ccatcatgaa tcaacgtctc 420
 tgctgtatcc tgggtggctct ctccctggagg ggggggcttca ttcattctat catacagggtg 480
 gctctcattg ttcgacttcc tttctgtggg cccaatgagt tagacagtta cttctgtgac 540
 atcacacagg ttgtccggat tgctgtgccc aacaccttcc cagaggagtt agtgatgac 600
 tgtagtagtg gtctgatctc tgtgggtgtgt ttgattgctc tgttaatgtc ctatgccttc 660
 cttctggcct tgttcaagaa actttcaggc tcagggtgaga ataccaacag ggccatgtcc 720
 acctgctatt ccacacattac cattgtgtgtg ctaatgtttg ggccatccat ctacatttat 780
 gctcgcccat ttgactcgtt ttccctagat aaagtgggtg ctgtgttcaa tactttaata 840
 ttccctttac gtaatcccat tatttacaca ttgagaaaca aggaagtaaa ggcagccatg 900
 aggaagttgg tcaccaaata tattttgtgt aaagagaag 939

<210> 436
 <211> 640
 <212> DNA
 <213> Unknown (H38g285 nucleotide)

<220>
 <223> Synthetic construct

<400> 436
 tgcttgttgt aactgtacca ggtatgcctg ctcaccagag acccgatctt gcaagacctc 60
 cattaagaag ctggtatcta ttgttctcct tgtctctgag tctattcttt gggtttggac 120
 aggtgagtgt gtttctcaca atgacacaga gtgtactgtg aatgagcctg tttgcttcat 180
 gttctcctag atgcccttct gcctcagcta gatcttgccc tagacctact atgagcaagt 240
 ggtcatgctg aatctggtat gtgcagacat cacatatata gtccatacct gtggtctctt 300
 atggcctttt ctgtggatgg atttgatata tttggcatta ttatccacag atatcagaca 360
 ttgcaggctg tactgtagct acctgcaaaa gaatctgtgc ccaaagtatt tagcatatat 420
 gccttccata tttgcgtcac cctgtacctg ctcatgatag gattctactc ctttttttct 480
 tgttgcttta gctaccatac actcacagtg attcccatct ccttgctcat ctttttactc 540
 attagtgcct tccatgttca ataccatcac ctgtgggta aagagtaagc atatccaaga 600
 aaacatggta cagagatttt gtgggaaaat ttctgacct 640

<210> 437
 <211> 989
 <212> DNA
 <213> Unknown (H38g286 nucleotide)

<220>
 <223> Synthetic construct

<400> 437
 atgtgtctct tgaccttgca ggtcactggc ccaatgaatg tctctgagcc aaattccagc 60
 tttgcttttag taaatgaatt tatactccaa gatttatctt ttgagtggac aattcagatc 120
 ttctcttct cactcttcac tacaacatat gcactgacca taacaggaaa cggagccatt 180
 gcttgcgccc tgtggtgtga ccggcgacgt cacactccca tgtacatgtt cctgggaaat 240

ttctcctttt	tagagatatg	gtatgtctct	tctacagttc	ccaagatggt	gggtcaacttc	300
ctttcagaga	aaaaaaccat	ctccttttgt	ggatgttttc	tccaatttta	tttcttcttc	360
tctttgggta	catctgaatg	cttgattttg	actgtgatgg	cctttgatca	gtaccttggt	420
atctgccatc	ccttgcaacta	tcctaataaa	tcattgactgg	gcattctctgt	gccaaactgg	480
tcatactgtg	ctgggtttgt	ggattttctgt	gtttcctgat	ccccactgtt	ctcatctctc	540
agatgccctt	ctgtgggtcca	aacattaatg	accatgttgt	gtgtgaccca	gggccactat	600
ttgcattggc	ttgtgtctct	gccccaaaga	tccaactgtt	ttgctacact	ctaagctcat	660
tagttatttt	tggttaacttc	ctctttatta	ttggatccta	tactcttgtc	ctgaaagctg	720
tggtgggtat	gccttcgagc	actgggaaac	ataaagcctt	ctctacctgt	gggtctcatt	780
tggctgtggt	atcactgttc	tatggctctc	ttatggctcat	gtgtgtgagt	ccaggacttg	840
gacactctat	ggggatgcag	aaaatcaaaa	ctttgttcta	tgctatgggt	acccactctc	900
tcaatcccct	tatctatagc	ctccagaata	aggagataaa	ggcagccctg	aggaaagttc	960
tggggagtgc	caacataatc	taagccata				989

<210> 438

<211> 930

<212> DNA

<213> Unknown (H38g287 nucleotide)

<220>

<223> Synthetic construct

<400> 438

atgatggaca	accactctag	tgccactgaa	ttccaccttc	taggcttccc	tgggtcccaa	60
ggactacacc	acattctttt	tgctatatcc	ttttcttctc	atttagtgac	attaatggga	120
aacacgggtca	tcattgtgat	tgtctgtgtg	gataaacgtc	tgcagtcccc	catgtatttc	180
ttcctcagcc	acctctctac	cctggagatc	ctggtcacaa	ccataattgt	ccccatgatg	240
ctttggggat	tgctcttcc	gggatgcaga	cagtatcttt	ctctacatgt	atcgctcaac	300
ttttcctgtg	ggaccatgga	gtttgcatta	cttggagtgga	tggctgtgga	ccgttatgtg	360
gctgtgtgta	accctttgag	gtacaacatc	attatgaaca	gcagtacctg	tatttgggtg	420
gtaatagtgt	catgggtgtt	tggatttctt	tctgaaatct	ggcccatcta	tgccacattt	480
cagtttacct	tccgcaaatc	aaattcatta	gaccattttt	actgtgaccg	agggaatttg	540
ctcaaacctgt	cctgcgataa	cactcttctc	acagagttta	tccttttctt	aatggctggt	600
tttattctca	ttggttcttt	gatccctacg	attgtctcct	acacctacat	tatctccacc	660
atcctcaaga	tcccgtcagc	ctctggcccg	aggaaagcct	tctccacttt	tgccctccac	720
ttcacctgtg	ttgtgattgg	ctatggcagc	tgcttgtttc	tctacgtgaa	acccaagcaa	780
acacagggag	ttgagtacaa	taagatagtt	tccctgttgg	tttctgtgtt	aaccccttcc	840
ctgaatcctt	tcattctttac	tcttcggaat	gacaaagtca	aagaggccct	ccgagatggg	900
atgaaacgct	gctgtcaact	cctgaaagat				930

<210> 439

<211> 915

<212> DNA

<213> Unknown (H38g288 nucleotide)

<220>

<223> Synthetic construct

<400> 439

atgtccaaca	caaattggcag	tgcaatcaca	gaattcattt	tacttgggct	cacagattgc	60
ccggaactcc	agtctctgct	ttttgtgctg	tttctgggtg	tttacctcgt	cacctgtcta	120
ggcaacctgg	gcatgataat	gttaattgata	ctggactctc	gccttcacac	gccccatgac	180
ttcttctctca	ctaacttagc	ctttgtggat	ttgtgctata	catcaaatgc	aaccccgag	240
atgtcgacta	atatactgata	tgagaagacc	atttcctttg	ctgggttgctt	tacacagtgc	300
tacattttca	ttgcccttct	actcactgag	ttttacatgc	tgccagcaat	ggcctatgac	360
cgctatgtgg	ccatatatga	ccctctgcgc	tacagtgtga	aaacgtccag	gagagtttgc	420
atctgcttgg	ccacatttcc	ctatgtctat	ggcttctcag	atggactcct	ccaggccatc	480
ctgaccttcc	gectgacctt	ctgtagatcc	agtgtcatca	accacttcta	ctgtgctgac	540
ccgcccgtca	ttaaagcttcc	ttgttctgat	acttatgtca	aagagcatgc	catgttcata	600
tctgtgtggc	tcaacctctc	cagctccctc	accatcgctc	tgggtgtccta	tgccctcatt	660
cttgctgcca	tcctccggat	caaatcagca	gaggggaaggc	acaaggcatt	ctccacctgt	720

ggttcccata	tgatggctgt	caccctgttt	tatgggactc	tcttttgc	gtatataaga	780
ccaccaacag	ataagactgt	tgaggaatct	aaaataatag	ctgtctttta	cacctttgtg	840
agtcgggtac	ttaatccatt	gatctacagt	ctgaggaata	aagatgtgaa	gcaggccttg	900
aagaatgtcc	tgaga					915

<210> 440

<211> 939

<212> DNA

<213> Unknown (H38g289 nucleotide)

<220>

<223> Synthetic construct

<400> 440

atggcaaadc	tgagccagcc	ctccgaatct	gtcctcttgg	gcttctcttc	ctttgggtgag	60
ctgcaggccc	ttctgtatgg	ccccttcttc	atgctttatc	ttctcgccct	catgggaaac	120
accatcatca	tagttatgg	catagctgac	acccacctac	atacacccat	gtacttcttc	180
ctgggcaatt	ttccctgct	ggagatcttg	gtaaccatga	ctgcagtgcc	caggatgctc	240
tcagacctgt	tggtcccca	caaagtcatt	accttcaactg	gctgcatgg	ccagttctac	300
ttccactttt	ccctgggggc	cacctccttc	ctcatcctga	cagacatggc	ccttgatcgc	360
tttgtggcca	tctgccaccc	actgcgctat	ggcactctga	tgagccgggc	tatgtgtgtc	420
cagctggctg	gggctgcctg	ggcagctcct	ttcctagcca	tggtacccac	tgctctctcc	480
cgagctcatc	ttgattactg	ccatggcgac	gtcatcaacc	acttcttctg	tgacaatgaa	540
cctctcctgc	agttgtcatg	ctctgacact	cgctgttgg	aattctggga	ctttctgatg	600
gccttgacct	ttgtcctcag	ctccttctctg	gtgacctca	tctcctatgg	ctacatagtg	660
accactgtgc	tgcggtatcc	ctctgccagc	agctgccaga	aggctttctc	cacttgccgg	720
tctcacctca	cactgggtctt	catcggtctac	agtagtacca	tctttctgta	tgtaggcct	780
ggcaaagctc	actctgtgca	agtcaggaag	gtcgtggcct	tggtgacttc	agttctcacc	840
ccctttctca	atccctttat	ccttaccttc	tgcaatcaga	cagttaaaac	agtgtctacag	900
gggcagatgc	agaggctgaa	aggcctttgc	aaggcaca			939

<210> 441

<211> 948

<212> DNA

<213> Unknown (H38g290 nucleotide)

<220>

<223> Synthetic construct

<400> 441

atgaagatag	caaacaacac	agtagtgaca	gaatttatcc	tccttgggtct	gactcagtct	60
caagatatcc	agctcttgg	ctttgtgctg	atcttaattt	tctaccttat	catcctccct	120
ggaaattttc	tcattatctt	caccataagg	tcagaccctg	ggctcacagc	ccccctctat	180
ttattttctg	gcaacttggc	cttctctggat	gcacccact	ccttcattgt	ggctcccagg	240
atgttgggtg	acttctcttc	tgagaagaag	gtaatctcct	acagaggctg	catcactcag	300
ctctttttct	tgcacttctc	tggaggagg	gagggtattac	tccttgttgt	gatggccttt	360
gaccgctaca	tcgccatctg	cggcctctg	cactgttcaa	ctgtcatgaa	ccctagagcc	420
tgctatgcaa	tgatgttggc	tctgtggctt	gggggttttg	tccactccat	tatccagggtg	480
gtcctcatcc	tcgcttgcc	tttttgtggc	ccaaaccagc	tggaacaact	cttctgtgat	540
gtccgacagg	tcacaaagct	ggcttgacc	gacatgtttg	tggtggagct	tctgatggtc	600
ttcaacagtg	gcctgatgac	actcctgtgc	tttctggggc	ttctggcttc	ctatgcagtc	660
atcctctgcc	atgttcgtag	ggcagcttct	gaagggaaga	acaaggccat	gtccacgtgc	720
accactcgtg	tcattattat	acttcttatg	tttggacctg	ctatcttcat	ctacatgtgc	780
cccttcagg	cgttaccagc	tgacaagatg	gttctctctc	ttcacacagt	gatctttcca	840
ttgatgaatc	ctatgattta	tacccttcgc	aaccaggaag	tgaaaacttc	catgaagagg	900
ttattgagtc	gacatgtagt	ctgtcaagtg	gattttataa	taagaaac		948

<210> 442

<211> 1034

<212> DNA

<213> Unknown (H38g291 nucleotide)

<220>

<223> Synthetic construct

<400> 442

atgcaccttc	ccaattcttc	tgaaattgcg	attaccacct	tctttctgat	tggaatacca	60
gggctggagc	atgcccata	atggatatct	gtcccatct	gcctcatgta	cttggtagcc	120
atcctaggca	attgcacaat	cctctttgtt	atcaggactg	agccctcact	ccatgcaccc	180
atgtactatt	tcttttccat	gttggtctgc	tctgatctgg	gcctgtccct	ctcctaccta	240
cccactatgc	tgaggatctt	tgtattcaat	gccacaggaa	tctcctcaaa	tgctcgcttt	300
gctcaagaat	tctttattca	tggattcaca	gatatggagt	cctcagtgc	tctcgtcatg	360
tcttttgacc	ggttttggcc	atatgccacc	ctctgaggta	catatctgag	gtactgggtga	420
gctgtatcct	caccagtgcc	agagttgcca	aaatggggct	gttggtttctc	attaaaagag	480
aaacaacact	aaactcatta	aaagaaacaa	ctaactcatg	ctgttagtac	tcccatttcc	540
tttcaactctt	acaaggttga	catattgtag	gaaaagccta	ctctctcatt	cctattgtct	600
ccatcaggat	gtcaggaagc	tggcctgctc	cgacaacact	gtcaacttct	tctatggttt	660
ctttcttgcc	ctgtgtatga	tgtcagaaag	tgtgttcatt	actgtgtctt	atgtgtctat	720
cctgaagacg	atcatgggaa	ttggatccca	tagggagcgg	ctcaaggccc	tcaacacctg	780
tgtctcccat	atctgtgctg	tgtttatctt	ctatgcgccc	gtcattgctt	tggcatccat	840
gcactgcttt	ggcatccatg	aactgctttg	gcaagcacag	gtcccccactg	gccatgatcc	900
tcattgctga	tgttttcttg	ctagtgccac	ctcttatgaa	tcccattgta	tattgtgtga	960
agacacagca	aattcatgaa	aaagttttag	gaaaactggg	tctacaacaa	cggtgtcagt	1020
aaacgtggta	caag					1034

<210> 443

<211> 713

<212> DNA

<213> Unknown (H38g292 nucleotide)

<220>

<223> Synthetic construct

<400> 443

ccacttattt	gaccagatcc	attcatcttt	acacaattgt	gttcattcct	taataaatat	60
gtagegtcaa	ctcgggttaa	tgatcataac	atagatcagg	ctccataatc	caggagcata	120
atcctaaatc	tgctcttatt	tcttttggga	ttaaaggcat	gtggagcaat	gttaattctt	180
gtttcctttc	tagccttccc	agagagaaag	agctaggatt	gaaacagcga	ggggaactac	240
tctagtgcc	ctcaattctg	tctcctgggc	tcccaggct	ttgaggaact	gccccatttc	300
cttttggtta	acttcttctt	tcacttgatg	agattaatgg	gaaatgcagt	catttacatg	360
gttgaattga	tgaagtcttc	agtctcccg	ggattttctt	ctcagtcaac	tcttcatctt	420
ttcacacagt	ctattaatgg	acatttccat	tgttattgct	tctttgatcc	agattgatcc	480
ctactccagt	atccccctcag	cgtctggcca	aaaaataatc	cttctccact	catgcctccc	540
atttcacctg	tgtggggatt	gactatgaca	gctgcttgtt	tctctacgtg	aaacccaagc	600
aaatttgggc	agcagaataa	aacaaggtag	ttttcctgtt	tattttcctg	ttgacccctt	660
ttctgaacct	tcttacaggt	cagatttact	gacctaaatc	agtttttaggt	ggg	713

<210> 444

<211> 931

<212> DNA

<213> Unknown (H38g293 nucleotide)

<220>

<223> Synthetic construct

<400> 444

cccatgaaa	tgccaacaa	tgctactgag	tttatattcc	tgggactttc	ccaagattct	60
ggaatgcaat	tgatgttctt	tgtcttattt	ctcctcttct	acgtcgtgat	catggtggga	120
aatttgctca	ttttgcttat	ggtcttttct	gactcccgac	tacacacacc	catgtatttc	180
ttcctcagta	acctgtcttt	tgtggacatt	gcctgttctc	cagccacagc	acccaagatg	240
attgaagact	ttgtttctga	gaaaaagact	atttcttact	ggggctgtat	aactcagatg	300
tttaccttcc	acttttttgg	ttgtgctgag	atttttgttt	tgactgtcat	ggctttttag	360

cgctatgctg	ctatctgcca	acccctccgt	tacactgtca	tcatgagtgc	taatgcttat	420
actgtgctgg	catcactgtc	ctgggtgggg	gccctgggtc	attcctttgt	tcagaccctc	480
ctgaccttcc	agctgccctt	ctgtaatgct	caggttatag	accattactt	ttgtgatgtc	540
caccagtc	taaaacttgc	ctgtgctgat	acaactctgg	taaatatgtt	ggtgggtgcc	600
aacagtggtc	tcatctccct	ggggtgttct	ctcattcttt	tggcctccta	cacagtcatt	660
ctgttttagtc	ttcaaaaaca	gtctgcagag	agctgacaca	aagttctctc	tacctgtgga	720
tctcatctga	ctatagtaac	tttcttcttt	gttccgtgta	tctttattta	tctccatcca	780
ctactttccc	attggataaa	gctgtgtctg	tgttctatac	caccatcacc	ccaatgctga	840
accactcat	ctatactctg	aggaatgagg	agtaaagaat	gccatgaggc	ggctatggag	900
tagcaagatc	tccttgaagg	aaaagcagag	a			931

<210> 445

<211> 968

<212> DNA

<213> Unknown (H38g294 nucleotide)

<220>

<223> Synthetic construct

<400> 445

atggaaatcc	taagcaactc	aacatctaaa	tttccaacct	tcttggtgac	cggcattcct	60
ggcctagagt	ctgcccatgt	ctggatctcc	attcctttct	gctgttttta	tgccattgcc	120
ctctctggga	acagcgtgat	cctgtttgtc	atcattaccc	agcagagtct	ccatgaaccc	180
atgtattatt	tcctctccat	gctatcagcc	actgatctgg	gcttgactgt	ttcttcattg	240
tcaacaacat	taggtatcct	ctgggttgag	gcagtgaat	cagtctatac	agctgcattg	300
tccagatgtt	ttttcttcat	ggattcactt	ttatggaatc	tggagtgtctg	gtggctacag	360
cctttgaccg	ttatgtggcc	atctgtgatc	ctctgaggta	cactaccatt	ctcactaatt	420
ccagaatcat	tcaaattgggt	cttctgatga	ttacacgtgc	tatagtacta	atattaccac	480
tacttttgc	ccttaagcct	ctctatttct	gtagaatgaa	tgccctttct	cactcctatt	540
gttaccatcc	agatgtgatt	caattagcat	gttcagacat	tggggcaaat	agcatctgtg	600
gattaattga	tctcatcctg	accactggaa	tagatacacc	atgcattgtc	ctgtcatata	660
tcttaattat	tcgctttgtc	ctcagaattg	cctcccctga	agaatggcac	aaggctctca	720
gcacctgtgt	ctcccacgtg	ggagcagttg	cttcttctta	catccacatg	ctgagcctgt	780
ccttggtgta	tcgctatggg	cggtcagccc	ccagagtagt	ccattcagtg	atggctaacg	840
tatacctgct	tttaccctct	gtgctcaacc	ccatcatcta	cagtgtaaaa	acaaaacaaa	900
tccgcaaggc	tatgctcagt	ctgctgctta	caaatgaac	agacatagtt	ttatttgata	960
caaacctg						968

<210> 446

<211> 963

<212> DNA

<213> Unknown (H38g295 nucleotide)

<220>

<223> Synthetic construct

<400> 446

cacacagagc	cacggaatct	cacaggtgtc	tgagaattcc	tcctcctggg	actctcagag	60
gaccagaaac	tgcagcctat	cctcgctttg	ctgtccctgt	ccctgtccat	gtatctgggtc	120
acgggtgctga	ggaacctgct	cagcatcctg	gctgtctgct	ctgactcccc	cctccacacc	180
cccagggtact	tcttcctctc	caacctgtgc	tgggctgaca	tgggtttcac	ctccgccacg	240
gttcccaaga	tgattgtgga	catgcagtcg	catagcagag	tcacgtctca	tgccgggtgtg	300
ctgacgcaga	tgtctttctt	ggctcttttt	gcatgtatag	aaggcatgct	cctgactgtg	360
atggcctatg	actgctttgt	agccatctgt	cgccctctgc	actaccaggt	catcgtgaat	420
cctcacctct	gtgtcttcgt	tttggtgtcc	ttttctctta	gcctgttgga	ttcccagctg	480
cacagttgga	ttgtgttaca	attcaccatc	gtctagaatt	tggaaatctc	taattttgtc	540
tgtgaccctc	ctcaacttct	caaacttgcc	tgttctgaca	gcgtcatcaa	tagcatattc	600
atatattttcg	atagtactat	gttttggtttt	cttcccattt	cagggatcct	atgggtcttac	660
tataaaatca	tccctcccat	tctaaggatt	tcatcgtcag	atgggaagta	taaagccttc	720
tccacctgtg	gctctcacct	agccgttggt	tgctgatttt	atggaacagg	cattggcatg	780
tacctgactt	cagctgtgtc	acaaccccc	aggaatgggt	tggtggtcatc	agtgatgtat	840

gctgtggtca ccccatgct gaaccttttc atctacagcc tgagaaacag gaacatacaa	900
agtgcctgt ggaggctgca cagcagaaca gtcgaatctc atgatttgtt ccatcctttc	960
tct	963

<210> 447

<211> 975

<212> DNA

<213> Unknown (H38g296 nucleotide)

<220>

<223> Synthetic construct

<400> 447

atggcaatat tcaataacac cacttcgtct tctcaaaact tcttcctcac tgcattccct	60
gggctggaat gtgctcatgt ctggatctcc attccagtct gctgtctcta caccattgcc	120
ctcttgggaa acagtatgat ctttcttgct atcattacta agcggagact ccacaaaccc	180
atgtattatt tctctccat gctggcagct gttgatctat gtctgacct tacgaccctt	240
cccactgtgc ttggtgttct ctggtttcat gcccgggaga tcagctttaa agcttgcttc	300
attcaaagt tctttgtgca tgctttctcc ttgctggagt cctcgggtgct ggtagccatg	360
gcctttgacc gcttcgtggc tatctgtaac ccactgaact atgctactat cctcacagac	420
aggatgggccc tggatagagg gctggctatc tgcattagac cagcagtttt ctacttccc	480
cttctttagtag ccataaacac tgtgtctttt catgggggtc acgagctttc ccatccattt	540
tgctaccacc cagaagtgat caaatacaca tattccaaac cttggatcag cagtttttgg	600
ggactgtttc ttcagctcta cctgaatggc actgacgtat tgtttattct tttctcctat	660
gtcctgatcc tccgtactgt tctgggcatt gtggcccgaa agaagcaaca aaaagctctc	720
agcacttggt tctgtcacat ctgtgcagtc actattttct atgtgccact gatcagcctc	780
tctttggcac accgctctt ccactccacc ccaaggggtc tctgtagcac tttggccaat	840
atztatctgc tcttaccacc tgtgctgaac cctatcattt acagcttgaa gaccaagaca	900
atccgccagg ctatgttcca gctgtcccaa tccaagggtt catgggggtt taatgtgagg	960
ggtcttaggg gaaga	975

<210> 448

<211> 945

<212> DNA

<213> Unknown (H38g297 nucleotide)

<220>

<223> Synthetic construct

<400> 448

atggagacgt gggatgaacca gtcctacaca gatggcttct tctcttagg catcttctcc	60
cacagtactg ctgacctgt cctcttctcc gtggttatgg cggctctcac agtggccctc	120
tgtgggaatg tctcctcat cttcctcatc tacatggacc ctacacctca ccccccatg	180
tacttcttcc tcagccagct ctccctcatg gacctcatgt tggctgtac caatgtgcca	240
aagatggcag ccaacttct gtctggcagg aagtccatct cctttgtggg ctgtggcata	300
caaattggcc tctttgtctg tcttgtggga tctgaggggc tcttgctggg actcatggct	360
tatgaccgct atgtggccat tagccacca cttcactatc ccatcctcat gaatcagagg	420
gtctgtctcc agattactgg gagctcctgg gcctttggga taatcgatgg cttgatccag	480
atgggtgtag taatgaattt cccctactgt ggcttgagga aggtgaacca tttcttctgt	540
gagatgctat ccttgttgaa gctggcctgt gtagacacat ccctgtttga gaagggtgata	600
tttgcttget gtgtcttcat gcttctcttc ccattctcca tcatcgtggc ctctatgct	660
cgcattctag ggactgtgt gcaaatgcac tctgtcagg cctggaaaaa ggccctggcc	720
acctgctcct cccacctgac agctgtcacc ctcttctatg gggcagccat gttcatctac	780
ctgaggccta ggactaccg ggccccccagc catgacaagg tggcctctat cttctacag	840
gtccttactc ccatgtcaa cccctcatt tacagcttga ggaacagggg ggtgatgggg	900
gcactgagga aggggctgga ccgctgcagg atcggcagcc agcac	945

<210> 449

<211> 965

<212> DNA

<213> Unknown (H38g298 nucleotide)

<220>

<223> Synthetic construct

<400> 449

atgtcaccac	tcaaccaaac	tactgagaac	caccagagct	tcttcaccct	gactgggatt	60
ccaggaatgc	cagagaaaga	cttatggatg	gccttgcccc	tctgtcttct	ttatagcacc	120
acgatcttgg	gaaatgtcac	catccttggt	gtcatcaaag	ttgagcaaag	tctccatgag	180
cccatgtatt	tttctagcca	tgttagctgc	cactgacctc	agcctttcac	tgtcttccat	240
gcctaccatg	gtcagtgttc	actggttcaa	ctggcgttca	ataactttta	atggctgcct	300
tatccagatg	ttcttcatcc	acacatttgg	gggagtggaa	tcaggtgttc	tggtggccat	360
ggcctttgat	cgctttgtgg	ccatccgctt	tcctttgcac	tatgctacaa	ttctcactca	420
cagtgtcatc	agcaagattg	cagcagccat	cctgctacgg	agtgtggggg	ctgtgctccc	480
tgtgcctttt	ctcatcaaaa	ggttaccttt	ctgtcactcc	aatgtcctct	cccatgcata	540
ctgcctccat	caggatgcca	tgaggcttgc	ctgtgctgac	actgggtgtca	atagcatcta	600
tggcctgttg	gctgtgatct	tcatcattgt	actagatgcc	ttaatacttt	tggcctctta	660
cattctaata	ctgcaggcag	tattgagcat	tgcttcccag	gaagcacaggc	tcaaggctct	720
caacacctgt	ctctctcata	tctgcagtgc	tgcttttcta	tgtgcctctc	attgggtatga	780
ccctaattca	tcgctatggg	aagcatttgg	caccactaat	acacacattc	atggccaata	840
tctacctgct	tctccctcct	gtgctcaatc	ccattgtgta	cagtgttagg	accaagcaga	900
tctgatagca	gattgtccag	gccttttgtg	gggctagggt	tagcccttaa	tggcatctac	960
tattt						965

<210> 450

<211> 936

<212> DNA

<213> Unknown (H38g299 nucleotide)

<220>

<223> Synthetic construct

<400> 450

atgtctgttc	tcaataaactc	cgaagtcaag	cttttccttc	tgattgggat	cccaggactg	60
gaacatgccc	acatttggtt	ctccatcccc	atttgccctca	tgtacctgct	tgccatcatg	120
ggcaactgca	ccattctctt	tattataaag	acagagccct	cgttctcatga	gccccatgtat	180
tatttccttg	ccatgttggc	tgtctctgac	atgggcctgt	ccctctcctc	ccttctctacc	240
atgttgaggg	tcttcttggt	caatgccatg	ggaatttcac	ctaattgcctg	ctttgtctcaa	300
gaattcttca	ttcatggatt	cactgtcatg	gaatccctcag	tacttctaata	tatgtctttg	360
gaccgctttc	ttgccattca	caatccctta	agatcacagt	ctatcctcac	tagcaacagg	420
gttgctaaaa	tgggacttat	tttagccatt	aggagcattc	tcttagtgat	tccatttccc	480
ttcaccttaa	ggagattaaa	atattgtcaa	aagaatcttc	tttctcactc	atactgtctt	540
catcaggata	ccatgaagct	ggcctgctct	gacaacaaga	ccaatgtcat	ctatggcttc	600
ttcattgctc	tctgtactat	gctggacttg	gcactgattg	ttttgtctta	tgtgctgac	660
ttgaagacta	tactcagcat	tgcacttttg	gcagagaggc	ttaaggccct	aaatacctgt	720
gtctcccaca	tctgtgctgt	gtcaccttc	tatgtgccc	tcataccct	ggctgccatg	780
catcactttg	ccaagcaca	aagccctctt	gttgtgatcc	ttattgcaga	tatgttcttg	840
ttggtgccgc	cccttatgaa	ccccattgtg	tactgtgtaa	agactcgaca	aatctgggag	900
aagatcttgg	ggaagttgct	taatgtatgt	gggaga			936

<210> 451

<211> 923

<212> DNA

<213> Unknown (H38g300 nucleotide)

<220>

<223> Synthetic construct

<400> 451

atgaaaataa	atgacagctc	aggggaagac	ttcatcttag	ttggcttctc	agaatatccc	60
caggctgagt	tcatactttc	tctgtttgtc	tccgggttct	acaccatgac	attcacaggg	120
aacacagcca	tcactcttgg	ctctctgctg	gactaccggc	tccgcacccc	aatgtacttc	180

tctctccgaa	agctctcatt	tctggacatg	tgtttcacca	cctgcattgt	ccttcagatg	240
ctgggtgaaca	tctggggaga	gagtaagaag	gtcagctatg	taggctgcat	ggttcagtat	300
tctgtagcct	tggtctcttg	ctccacagag	tggtgtgcttc	ttgctatcat	ggctgtggac	360
cgttatgttg	ccgtccgctg	gccccctcac	tatgttacaa	tcatgcacca	acagatctgc	420
cactttctcg	cagccttgtc	ctggttttct	gggttagcca	actctctctt	tcactcttca	480
ctaaccacca	ttttgcctct	gtgtggccac	cgccgtgtgg	accatttctt	tgtgaggtcc	540
tgctcattgt	caagctgtcc	tgcgtggaca	ccggcccaac	tgaattgaag	atgttaattg	600
ctcgtgtgat	catccttgcc	cttcacagtgt	gcaccatcct	cacctcctat	gcctgcattg	660
ccagggtctg	gctgaggctg	cagtctgctg	aaggtcagca	gaaggccttt	gggacttgtg	720
cctcccacct	gatgggtggc	ttgctgttct	atggaaccat	catgttcatg	tgtcttcagc	780
tgaagagtaa	ctactctcag	attcagggaa	agctgcttcc	tcttgtttat	accattgctg	840
cccccaccta	gaacccacta	atctatgcac	tgaggaacaa	agttgtaaag	agggcaattg	900
gaaaattgat	ctggaaggat	tca				923

<210> 452

<211> 951

<212> DNA

<213> Unknown (H38g301 nucleotide)

<220>

<223> Synthetic construct

<400> 452

atggaaatag	ataaccagac	gtgggtgaga	gaatttattc	tccttggctt	atccagtgc	60
tggtgcactc	agatatccct	gttttccctg	ttcttggctc	catacctcat	gacagtgcctg	120
gggaactgtc	tcattgtcct	tctgatcaga	ctggacagcc	gactccacac	tcccatgtat	180
ttctttctca	ccaacctctc	ccttgctgat	gtctcctatg	ccacaagcgt	agtccccag	240
ctgctggcac	attttcttgc	agaacataaa	gccatcccat	tccagagctg	tgcagcccag	300
ttatttttct	ccctggcctt	gggtgggatt	gagtttgttc	tcctggcagt	gatggcctat	360
gaccgccatg	tggtgtgtc	tgaccgcctg	cgatactcgg	ccatcatgca	tggagggtctg	420
tgtgctaggt	tggccatcac	atcctgggtc	agtggctcca	tcaactctct	tgtgcagact	480
gctatcacct	ttcagctgcc	catgtgcact	aacaagttta	ttgatcacat	atcctgtgaa	540
ctcctagctg	tggtcaggct	ggcttgtgtg	gacacctcct	ccaatgaggc	tgccatcatg	600
gtgtctagca	ttgttcttct	gatgacacct	ttctgcctgg	ttctgttgtc	ctacatccgg	660
atcatctcca	ccatccataaa	gatccagtcc	agagaaggaa	gaaagaaagc	cttccacacg	720
tgtgcctctc	acctcacggt	ggttgccctg	tgtacggcca	caacgatttt	cacttacatc	780
cagcccccact	tggttccctc	agtccttcaa	gagaagctga	tctctgtctt	ctatgccatt	840
gttatgcctc	tgctgaaccc	tgtgatttat	agtctaagga	ataaagaggt	gaagggggcc	900
tggcataaac	tattagagaa	attctctgtgg	ttaacatcca	agctgggaac	t	951

<210> 453

<211> 918

<212> DNA

<213> Unknown (H38g302 nucleotide)

<220>

<223> Synthetic construct

<400> 453

atggaaggga	aaaatcaaac	caatatctct	gaatttctcc	tcctgggctt	ctcaagttgg	60
caacaacagc	aggtgctact	ctttgcactt	ttcctgtgtc	tctatttaac	agggctgttt	120
ggaaacttac	tcattcttgc	ggccattggc	tcggatcact	gccttcacac	acccatgtat	180
ttcttccctg	ccaatctgtc	cttggtagac	ctctgccttc	cctcagccac	agtcaccaag	240
atgctactga	acatccaaac	ccaaacccaa	accatctcct	atccccgctg	cctggctcag	300
atgtatttct	gtatgatgtt	tgccaatatg	gacaattttc	ttctcacagt	gatggcatat	360
gaccgttacg	tggccatctg	tcacccttta	cattactcca	ccattatggc	cctgcgcctc	420
tgtgcctctc	tggtagctgc	accttgggtc	attgccattt	tgaacctctc	cttgcacact	480
cttatgatgg	cccatctgca	cttctgctct	gataatgtta	tcaccatttt	cttctgtgat	540
atcaactctc	tcctccctct	gtcctgttcc	gacaccagtc	ttaatcagtt	gagtgttctg	600
gctacgggtg	ggctgatctt	tgtgggtacct	tcagtgtgta	tcctgggtatc	ctatatcctc	660
attgtttctg	ctgtgatgaa	agtccttctt	gccaaggaa	aactcaaggc	tttctctacc	720

tgtggatctc	accttgccctt	ggtcattctt	ttctatggag	caaacacagg	ggcttatatg	780
agcccttat	ccaatcactc	tactgaaaaa	gactcagccg	catcagtcac	ttttatgggt	840
gtagcacctg	tggtgaatcc	attcatttac	agtttaagaa	acaatgaact	gaaggggact	900
ttaaaaaaga	ccctaagc					918

<210> 454

<211> 933

<212> DNA

<213> Unknown (H38g303 nucleotide)

<220>

<223> Synthetic construct

<400> 454

atgggaccca	gaaaccaaac	agctgtttca	gaattttctc	tcataaaagt	gacagaggac	60
ccagaactga	agttaatccc	tttcagccctg	ttcctgtcca	tgtacctggg	caccatcctg	120
gggaacctgc	tcattctcct	ggctgtcacc	tctgactccc	acctccacac	ccccatgtac	180
ttccttctct	ttaatctctc	ctttactgac	atctgtttaa	ccacaaccac	agtcccaaag	240
atcctagtga	acatccaagc	tcagaatcag	agtatcactt	acacaggctg	cctcaccag	300
atctgtcttg	tcttggtttt	tgctggcttg	gaaagttgct	ttcttgcagt	catggcctac	360
gaccgctatg	tggccatttg	ccaccactg	aggtagacag	tcctcatgaa	tgccatttc	420
tggggcttgc	tgattcttct	ctccatgttc	atgagcacta	tggatgccct	ggttcagagt	480
ctgatgggat	tgcagctgtc	cttctgcaaa	aacgttgaaa	ttcctttggt	cttctgtgaa	540
gtcgttcagg	tcatacaagc	cgctgttct	gacacctca	tcaacaacat	cctcatatat	600
tttgcaagta	gtgtatttgg	tgcaattcct	ctctctggaa	taattttctc	ttattctcaa	660
atagtcacct	ctgttctgag	aatgccatca	gcaagaggaa	agtataaagc	gttttccacc	720
tgtggctgtc	acctctctgt	tttttccctg	ttctatggga	cagcttttgg	gggtgtacatt	780
agttctgtctg	ttgctgagtc	ttcccgaatt	actgctgtgg	cttcagtgat	gtacactgtg	840
gtccctcaaa	tgatgaaccc	cttcatctac	agcctgagaa	ataaggagat	gaagaaagct	900
ttgaggaaac	ttattggtag	gctgtttcct	ttt			933

<210> 455

<211> 939

<212> DNA

<213> Unknown (H38g304 nucleotide)

<220>

<223> Synthetic construct

<400> 455

atggaagcga	gaaaccaaac	agctatttca	aaattccttc	tcctggggact	gatagaggat	60
ccggaactgc	agcccgctct	tttcagccctg	ttcctgtcca	tgtacttggg	caccatcctg	120
gggaacctgc	tcatectctt	ggctgtcacc	tctgactctc	acctccacac	ccccatgtac	180
ttcttctctt	ccaatctctc	ctttttggac	atttggttaa	gcacaaccac	gatcccaaag	240
atgctgggtga	acatccaagc	tcagaatcgg	agcatcacgt	actcaggctg	cctcaccag	300
atctgctttg	tcttggtttt	tgctggcttg	gaaaattgtc	tccttgcagc	aatggcctat	360
gaccgctatg	tggccatttg	tcacccccctt	agatacacag	tcatacatgaa	cccccgccctc	420
tgtggcctgc	tgattcttct	ctctctgttg	actagtgttg	tgaatgccct	tcttctcagc	480
ctgatgggtg	tgaggctgtc	cttctgcaca	gacctggaaa	ttccgctctt	cttctgtgaa	540
ctggctcagg	tcatecaact	cacctgttca	gacacctca	tcaataacat	cctgatatat	600
tttgacgctt	gcataatttg	tggtgttctt	ctgtctggaa	tcattttgtc	ttacactcag	660
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tgtgggtctc	acctctccat	tgttctcttg	ttctatgggg	cagggttggg	gggtgtacatt	780
agttctgtgg	ttactgactc	acctaggaag	gctgcagtgg	cttcagtgat	gtattctgtg	840
ttccctcaaa	tggtgaaccc	ctttatctat	agtctgagga	ataaggacat	gaaaggaacc	900
ttgaggaagt	tcatagggag	gataccttct	cttctgtgg			939

<210> 456

<211> 939

<212> DNA

<213> Unknown (H38g305 nucleotide)

<220>

<223> Synthetic construct

<400> 456

atggaaccaa	gaaaccaaac	cagtgcattc	caattcatcc	tcctgggact	ctcagaaaag	60
ccagagcagg	agacgcttct	cttttccctg	ttcttctgca	tgtacctggt	catggtcgtg	120
gggaacctgc	tcatcatcct	ggccatcagc	atagactccc	acctccacac	ccccatgtac	180
ttcttcctgg	ccaacctgtc	cctgggtgat	ttctgtctgg	ccaccaacac	catccctaag	240
atgctggtga	gccttcaaac	cgggagcaag	gccatctctt	atccctgctg	cctgatccag	300
atgtacttct	tccatttctt	tggcatcgtg	gacagcgtca	taatcgccat	gatggcttat	360
gaccggttcg	tggccatctg	ccacccattg	cactacgcca	agatcatgag	cctacgcctc	420
tgtcgcctgc	tggctggcgc	cctctgggcg	ttttcctgct	tcattctact	cactcacatc	480
ctcctgatgg	cccgctctgt	tttctggcgc	agccatgagg	tgccctacta	cttctgcgac	540
ctcactccca	tcctccgact	ttcgtgcacg	gacacctctg	tgaataggat	cttcatcctc	600
attgtggcag	ggatgggtgat	agccacgccc	tttgtctgca	tcctggcctc	ctatgctcgc	660
atccttgtgg	ccatcatgaa	ggccccctct	gcaggcggca	ggaagaaagc	cttctccacc	720
tgcagctccc	acctgtctgt	ggttgctctc	ttctatggga	ccaccattgg	cgtctatctg	780
tgtccctcct	cggctctcac	cactgtgaag	gagaaagctt	ctgcgggtgat	gtacacagca	840
gtcaccacca	tgttgaatcc	cttcatctac	agcttgagga	acagagacct	gaaaggggct	900
ctcaggaagc	tggtaacacg	aaagatcacc	tcattcttcc			939

<210> 457

<211> 295

<212> DNA

<213> Unknown (H38g306 nucleotide)

<220>

<223> Synthetic construct

<221> misc_feature

<222> (1)...(295)

<223> n = A,T,C or G

<400> 457

atgtcagcct	ccagtatcac	ctcaacacat	ccaacttctc	tcttggtgat	ggggattcca	60
ggcctggagc	acctgcacat	ctggatctcc	atccccctct	cagcatatac	actggccctg	120
cttggaacct	gcactctcct	tctcatcatc	caggctgatg	cagccctcca	tgaacccatg	180
tacctcttct	tggccatggt	ggcagccatc	gaccagctct	ctatctctct	agcactgccc	240
ccgggacaga	cggtgattct	ggttcacgga	tengaagaat	aaaccctttg	ccggg	295

<210> 458

<211> 960

<212> DNA

<213> Unknown (H38g307 nucleotide)

<220>

<223> Synthetic construct

<400> 458

atgccatctg	cctctgccat	gatcattttc	aacctgagca	gttacaatcc	aggacccttc	60
attctggtag	ggatcccagg	cctggagcaa	ttccatgtgt	ggattggaat	tccttctgt	120
atcatctaca	ttgtagctgt	tgtgggaaac	tgcactcttc	tctacctcat	tgtgggtggag	180
catagtcttc	atgaacctat	gttcttcttt	ctctccatgc	tggccatgac	tgacctcatc	240
ttgtccacag	ctgggtgtgc	taaagcactc	agtatctttt	ggctaggggc	tcgcgaaatc	300
acattcccag	gatgccttac	acaaatgttc	ttccttctct	ataactttgt	cctggattca	360
gccattctga	tggccatggc	atttgatcac	tatgtagcta	tctgttctcc	cttgagatat	420
accaccatct	tgactcccaa	gaccatcatc	aagagtgtca	tgggcatctc	ctttcgaagc	480
ttctgcatca	tcctgccaga	tgtattcttg	ctgacatgcc	tgcccttctg	caggacacgc	540
atcatacccc	acacatactg	tgagcatata	ggtgttgccc	agctcgccctg	tgtgatatac	600
tcattcaact	tctgggtatg	cttttgtgtt	cccatcatga	cggatcatctc	agatgtgatt	660

ctcattgctg	tttctacgc	acacatcctc	tgtgctgtct	ttggccttcc	ctcccaagag	720
gcctgccaga	aagccctcgg	cacttgtggg	tctcatgtct	gtgtcctcct	catgttttat	780
acacctgctt	ttttctccat	cctcgcccat	cgctttggac	acaatgtctc	tcgcaccttc	840
cacatcatgt	ttgccaatct	ctacattggt	atcccacctg	cactcaacct	catgggttac	900
ggagtgaaga	ccaagcagat	cagagataag	gttatacttt	tgttttctaa	gggtacagga	960

<210> 459

<211> 936

<212> DNA

<213> Unknown (H38g308 nucleotide)

<220>

<223> Synthetic construct

<400> 459

atgagcggga	caaaccagtc	gagtgtctcc	gagttcctcc	tcctgggact	ctccaggcag	60
ccccagcagc	agcatctcct	ctttgtgttc	ttcctcagca	tgtacctggc	cactgtcctg	120
gggaacctgc	tcatcatcct	gtccgtaagc	atagactcct	gcctgcacac	ccccatgtac	180
ttcttctca	gcaacctgtc	ttttgtggac	atctgcttct	ccttcaccac	cgcccccaag	240
atgctggcca	atcacatact	cgagactcag	accatctcct	tctgtggctg	tctcacacag	300
atgtatttcg	ttttcatgtt	cgtggacatg	gacaatttcc	tcctagctgt	gatggcctat	360
gaccactttg	tcgccgtgtg	ccacccttca	cattacacag	caaagatgac	ccatcagctc	420
tgtgccctgc	tggttgctgg	attatgggtg	gttgccaacc	tgaatgtcct	tctgcacacc	480
ctgctgatgg	ctccactctc	attctgtgca	gacaatgcc	tcactcactt	cttctgcgat	540
gtgactcccc	tactgaaact	ctcctgctca	gacacacacc	tcaatgaggt	cataatcctt	600
agtgaggggtg	ccctgggtcat	gatcacccca	tttctttgca	tcctggcttc	ttatatgcac	660
atcacctgca	ctgtcctgaa	ggtcccatcc	acaaagggaa	ggtggaaagc	cttctccacc	720
tgtgggttctc	acctggctgt	ggttctctct	ttctacagca	ccatcattgc	tgtgtatttt	780
aacctctctgt	cctcccactc	agctgagaaa	gacactatgg	ctactgtgtt	gtatacagta	840
gtgactccca	tgctaaaacc	tttcatctac	agcctgagga	acagggtactt	gaaaggggct	900
ctgaaaaaag	tagttggcag	ggtgggtgtt	tctgtc			936

<210> 460

<211> 762

<212> DNA

<213> Unknown (H38g309 nucleotide)

<220>

<223> Synthetic construct

<400> 460

atgtacttct	tcctgcgcca	actctcagtg	gtggagctct	tctacaccac	tgacatcgtg	60
cccaggaccc	tggccaatct	gggtcccccg	catccccagg	ccatctcttt	ccagggtctg	120
gcagcccata	tgtacgtctt	cattgtcctg	ggcatctcgg	agtgtctgct	gctcactgcc	180
atggcctatg	accgatatgt	tgccatctgc	cagccccctac	gctattccac	cctcttgagc	240
ccacggggcct	gcatggccat	ggtgggtacc	tcctggctca	caggcatcat	cacggccacc	300
acccatgcct	ccctcatctt	ctctctacct	tttcgcagcc	acccgatcat	cccgcacttt	360
ctctgtgaca	tcctgccagt	actgaggctg	gcaagtgtct	ggaagcacag	gagcgagatc	420
tcctgtgatga	cagccaccat	agtcttcatt	atgatccctt	tctctctgat	tgtcacctct	480
tacatccgca	tcctgggtgc	catectagca	atggcctcca	cccagagccg	ccgcaaggctc	540
ttctccacct	gtctctccca	tctgtctcgt	gtctctctct	tctttggaac	agccagcatc	600
acctacatcc	ggcgcgaggc	aggctcctct	gttaccacag	accgcgtcct	cagtctcttc	660
tacacagtca	tcacacccat	gctcaacccc	atcatctaca	cccttcggaa	caaggacgtg	720
aggagggccc	tgcgacactt	ggtgaagagg	cagcgccctt	ca		762

<210> 461

<211> 998

<212> DNA

<213> Unknown (H38g310 nucleotide)

<220>

<223> Synthetic construct

<400> 461

atggatggag	agaatcactc	agtgggtatct	gagttttttgt	ttctgggact	cactcattca	60
tgggagatcc	agctcctcct	cctagtgttt	tctctgtgc	tctatgtggc	aagcattact	120
ggaaacatcc	tcattgtgtt	ttctgtgacc	actgaccctc	acttacactc	ccccatgtac	180
tttctactgg	tcagtctctc	cttcattgac	ttaggagcct	gctctgtcac	ttctcccaag	240
atgatttatg	acctgttcag	aaagcgcaaa	gtcatctcct	ttggaggctg	catcgctcaa	300
atcttcttca	tccacgtcat	tgggtggtgtg	gagatgggtg	tgctcatagc	catggccttt	360
gacagttatg	tggccctatt	aagcccctcc	actatctgac	cattatgagc	ccaagaatgt	420
gcctttcatt	tctggctgtt	gcctggaccc	ttgttgtcag	tactccctg	ttccaactgg	480
catttcttgt	taatttacc	ttctgtggcc	ctaagtgtt	ggacagcttc	tactgtgacc	540
ttcctcagct	tctcagacta	gcctgtaccg	acacctacag	attgcagttc	atggtcactg	600
ttaacagtgg	gtttatctgt	gtgggtactt	tcttcatact	tctaactctc	tacgtcttca	660
tctgtttac	tgtttgaaa	cattcctcag	gtgggttcac	caaggccctt	tccactcttt	720
cagctcacag	cacagcggc	cttttgttct	ttgggtccacc	catgtttgtg	tatacatggc	780
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ttctgaatcc	agttgtctat	acattcagga	ataaggagat	gaaggcagca	ataaagagag	900
tatgcaaa	gctagtgtat	tacaagaaga	tctcataaat	gatacaataa	gcccttctcg	960
ttaaacaatga	tatggcttta	tgtttctttc	tttgatat			998

<210> 462

<211> 933

<212> DNA

<213> Unknown (H38g311 nucleotide)

<220>

<223> Synthetic construct

<400> 462

atggaagagt	acaacacatc	ctctacagac	ttcactttca	tggggctgtt	caacagaaag	60
gaaacctcag	gtcttatttt	tgccatcatc	tctatcatct	tcttcaccgc	actgatggcc	120
aatgggggta	tgatcttctc	gatccaaaca	gatttgccgc	ttcatacacc	catgtacttc	180
ctcctcagcc	acctttcctt	aattgacatg	atgtatattt	ccactattgt	gcctaagatg	240
ctgggttaatt	acctgctgga	tcaaaggacc	atttcctttg	tgggggtgcac	agctcaacac	300
ttcctctacc	ttacccttgt	gggagctgaa	ttcttctctg	tgggcctcat	ggcctatgac	360
cgtatgtgg	ccatttgcaa	ccctctgaga	taccctgtcc	tcatgagccg	cggggtctgt	420
tggatgatta	tagcaggttc	ctgggttggg	ggctctttgg	atggcttctc	cctaaccctc	480
atcaccatga	gctttccctt	ctgcaattcc	cgggagatta	accacttctt	ctgcgaggca	540
ccagcagtc	tgaagtggc	atgtgcagac	acagccctct	acgagacagt	gatgtatgtg	600
tgctgtgttt	tgatgctgct	gattcctttc	tctgtagtcc	ttgcttctta	tgcccgaatc	660
ctgactacag	ttcagtgcac	gagctcagtg	gagggcagga	agaaggcatt	tgccacttgc	720
tcatcccaca	tgactgtggt	gtccttgttc	tacggggctg	ccatgtacac	ctacatgctg	780
ccacattctt	accacaagcc	agcccaggac	aaagtccctc	ctgtgtttta	caccattctc	840
acacccatgc	tgaacccctc	catctacagc	cttagaaaca	aggatgtgac	tggagctctg	900
aagagggcct	tggggagggt	caagggtcct	caa			933

<210> 463

<211> 883

<212> DNA

<213> Unknown (H38g312 nucleotide)

<220>

<223> Synthetic construct

<400> 463

atccaatgca	agggctaata	gaagtgaatt	aagacattct	ctgtaactcc	aatatttaa	60
ggaaaccggg	aaatagccag	attcctctcc	aacctgtcct	tggctggcat	cggtttcccc	120
tccaccatag	tctccaagat	gattgtggac	atccagctc	acagcagagt	catctcctat	180
gcgggctgcc	tgactcaggt	atctcttttt	gccgtttttg	gatgcatgga	agacatgctt	240
ctgagtgtga	tggcttatga	ccggtttgtg	gacatctgtc	acctcttgga	ttatccagtc	300

atcatgaacc	catgtttctg	tggttcccta	gttttggtgt	ctttttttct	cagtctttta	360
gactcccage	tgcacaattg	gattgcctta	caaattacct	gcttcaagga	tgtggaaatt	420
cccaatttct	tctgtgacct	ttctcaactc	ccccaccctt	gcctgttggtg	acaccttcac	480
caatgacata	gtcatgtatt	tccttgctgc	catatttggg	tttcttccca	tttcggggcc	540
ttttctctta	ctataaaatt	gtttccctcca	ttctgagggt	ttcatcatca	ggtagggagt	600
ataaagcctt	ctccacctgt	ggctctcacc	tgctcagttgt	ttgcttattt	tatggaacag	660
gctttggagg	ggacctcagt	tcagacatgt	cctcttatcc	cagaaaaggt	gcagtggcct	720
cagtgatgta	cacgggtggt	actcccatgc	tgaaccatt	catttacagc	ctaacaggga	780
aattaaaagt	gccctgcggc	agctgcactg	cagaatagtc	taatctcatt	ttcttattat	840
ctgttccatt	ccttccgtag	tgtgagttag	aaaaggcagc	aag		883

<210> 464

<211> 942

<212> DNA

<213> Unknown (H38g313 nucleotide)

<220>

<223> Synthetic construct

<400> 464

atgaccctgg	gatccctggg	aaacagcagc	agcagcggtt	ctgctacctt	cctgctgagt	60
ggcatccctg	ggctggagcg	catgcacatc	tggatctcca	tcccactgtg	cttcatgtat	120
ctggtttcca	tcccgggcaa	ctgcacaatt	ctttttatca	ttaaaacaga	gcgctcactt	180
catgaacctt	tgtatctctt	cctgtccatg	ctggctctga	ttgacctggg	tctctccctt	240
tgcactctcc	ctacagtcct	gggcaccttt	tgggttgag	cacgagaaat	tagccatgat	300
gcctgctttg	ctcagctctt	tttcattcac	tgcttctcct	tcctcgagtc	ctctgtgcta	360
ctgtctatgg	cctttgaccg	ctttgtggct	atctgccacc	ccttgcaacta	tgtttccatt	420
ctcaccaaca	cagtcattgg	caggattggc	ctggctctct	tgggtcgtag	tgtagcactc	480
atttttccat	taccttttat	gctcaaaaga	ttcccctatt	gtggctcccc	agttctctca	540
cattcttatt	gtctccacca	agaagtgatg	aaattggcct	gtgccgacat	gaaggccaac	600
agcatctacg	gcatgtttgt	catcgtctct	acagtgggta	tagactcact	gctcatcctc	660
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aaggccctta	acacctgtgt	ttcccacatc	tgtgctgtgc	tgctcttcta	cactcccatg	780
attggcctct	ctgtcatcca	tcgctttgga	aagcaggcac	cccacctggg	ccagggtggc	840
atgggtttca	tgtatcttct	ctttcctcct	gtgatgaatc	ccattgtcta	cagtgtgaag	900
accaaacaga	tccgggtagc	agtgcacgat	gccttttggt	ac		942

<210> 465

<211> 990

<212> DNA

<213> Unknown (H38g314 nucleotide)

<220>

<223> Synthetic construct

<400> 465

atgggactct	tcagacaatc	caaacatcca	atggccaata	tcacctggat	ggccaaccac	60
actggatggg	cggatttcat	cctgttgagg	ctcttcagac	aatccaaaca	tccagcacta	120
ctttgtgtgg	tcatttttgt	ggttttctct	atggcggtgt	ctggaaatgc	tgtcctgac	180
cttctgatac	actgtgacgc	ccacctccac	acccccatgt	actttttcat	cagtcaattg	240
tctctcatgg	acatggcgta	cattttctgtc	actgtgccca	agatgtcctt	ggaccaggtc	300
atgggtgtga	ataagatctc	agccccctgag	tgtgggatgc	agatgttctt	ctacgtgaca	360
ctagcaggtt	cagaattttt	ccttctagcc	accataggct	atgaccgcta	cgtggccatc	420
tgccatcctc	tccgttaccc	tgtcctcatg	aaccataggg	tgtgtctctt	cctgtcatca	480
ggctgctggt	tcctgggctc	agtggatggc	ttcacattca	ctcccatcac	catgaccttc	540
cccttccgtg	gatcccgagg	gattcatcat	ttcttctgtg	aagttcctgc	tgtattgaat	600
ctctcctgct	cagacacctc	actctatgag	attttcatgt	acttgtgctg	tgtcctcatg	660
ctcctcatcc	ctgtgggtgat	catttcaagc	tcctatttac	tcctcctcct	caccatccac	720
gggatgaact	cagcagaggg	ccggaaaaag	gcctttgcca	cctgtctctc	ccacctgact	780
gtggctcatcc	tcttctatgg	ggctgccatc	tacacctaca	tgtctcccag	ctcctaccac	840
acccctgaga	aggacatgat	ggtatctgtc	ttctatacca	tcctcactcc	agtgggtgaac	900

cctttaatct atagtcttag gaataaggat gtcattggggg ctctgaagaa aatgttaaca 960
gtggaacctg cctttcaaaa agctatggag 990

<210> 466

<211> 591

<212> DNA

<213> Unknown (H38g315 nucleotide)

<220>

<223> Synthetic construct

<400> 466

gctgccatgg	cttaagaccg	gtacatagca	atctgtaacc	cgctgctcta	tacagtgatt	60
atgtccaaga	aggtttggtg	ccagcttgca	attggagcat	ttttgggggg	cactatgagc	120
tcaattattc	ataccacgaa	cactttccat	ctgtcattct	gctccagaga	tattaaccat	180
ttcttttggtg	atatctcccc	actcttctct	ctgtcctgca	ctgacacata	catgcatgac	240
atcattctgg	tggctcttgc	cagttttgtg	gaagcaatct	gtcttctatc	agttctcctt	300
tcttatgtct	tcattatggc	agctattctt	agaacagggt	ctgtggaggg	aagaagaaga	360
gggttctcca	cttgtgcttc	ccacctgact	gtggtcacta	tgtatcatgg	taccttgatc	420
ttcatttatt	tgcgtccag	cactggccat	tactggata	ttgacaaagt	gacctctgtg	480
ttctatactt	tgattatacc	tatgttgaac	cctctaattt	acagtctaag	gaacaaagat	540
gtcaaaaatg	cttttagaaa	agtgattggc	cgaaaattac	ttccttaagg	t	591

<210> 467

<211> 938

<212> DNA

<213> Unknown (H38g316 nucleotide)

<220>

<223> Synthetic construct

<400> 467

atgatgactc	ttaagaactg	cactgtgttt	actgacttta	tattcttagg	actttcaggt	60
acacaggata	tacagcaggg	gctctttgtg	cttttcttcc	tgatttatgg	cataactgtg	120
attgtcaatc	tagggatgat	cctactgatc	aagatggatc	tcagacttca	cacaccggtg	180
tattatttcc	tgagcaattt	gtctttctgt	gatgtctgct	actcttccac	gtctctccca	240
aatgctagct	gatttcttat	cggaccaaaa	gtggattccg	tataatttat	gtgccattca	300
gatgtattta	tttggagtct	ttgcagatgt	ggaatgtctc	atggtggctg	tcattggccta	360
tgatcggtat	gttgccattt	gcaatccact	tctttatacg	atcactatgc	ccaggaggat	420
ctgcaccag	ctagtggctc	ttgcctatgt	tgtaggtttg	gtggattctg	caatccacac	480
ctgctgcaca	ttcagattgt	cattctgcaa	ttctaattgc	atcaatcact	ttttctgtga	540
catccccacc	ttgctagccc	tcaatccctac	tattaattgc	tattaatgag	atagtgatgt	600
tcacattcgt	tggctgtggt	gcgggggtgca	gcattgtcac	tgtcttctct	tcctacagct	660
acatcataat	taccatcctt	aaaatgagct	cagctgaggg	cagacggaaa	gccttctctc	720
cctgcacctc	ccacttgatg	gccgtggctg	tatttcatgg	cacactcctg	ttcatgtatt	780
tcgcaccag	ttcaagttac	tcaatggaaa	cagacaaaaat	ggcctctggt	ttctacacag	840
ttgtcatacc	tatgttaa	ccactgatct	acagcttaag	gaatagggat	gtgaaagggtg	900
ctctgaaaaa	agcaataagc	actaaattat	attctgta			938

<210> 468

<211> 969

<212> DNA

<213> Unknown (H38g317 nucleotide)

<220>

<223> Synthetic construct

<400> 468

atgtcaacat	taccaactca	gatagcccc	aatagcagca	cttcaatggc	ccccaccttc	60
ttgctgggtg	gcatgccagg	cctatcaggt	gcacctctct	ggaggacatt	gccccctatt	120
gctgtctacc	ttctctctgc	actgggaaat	ggcaccatcc	tctggatcat	tgccctgcag	180

cccgcctgc	accgccaat	gcattcttc	ctctcttgc	ttagtggtc	tgatattgga	240
ttggctactg	cctgatgcc	cacactgctg	ggcatcgccc	ttgctgggtc	tcacactgtc	300
cctgcctcag	cctgecttct	acagatggtt	tttatccatg	tcttttctgt	catggagtcc	360
tctgtcttgc	tcgccaatgc	cattgatcgg	gcactggcca	tctgccgacc	tctccactac	420
ccagcgctcc	tcaccaatgg	tgtaattagc	aaaatcagcc	tggccatttc	tttctgatgc	480
ctgggtctcc	atctgcccct	gccattcctg	ctggcctaca	tggcctactg	cctcccacag	540
gtcctaacc	attcttattg	cttgcaccca	gatgtggctc	gtttggcctg	cccagaagct	600
tgggggtgcag	cctacagcct	atgtgtggtt	ctttcagcca	tgggtttgga	ccccctgctt	660
attttcttct	cctatggcct	gattggcaag	gtgttgcaag	gtgtggagtc	cagagaggat	720
cgtggaagg	ctgggtcaa	ctgtgctgcc	cacctctctg	cagtgtctct	cttctatatc	780
cctatgatcc	tcctggcact	gattaaccat	cctgagctgc	caatcactca	gcatacccat	840
actcttctat	cctatgtcca	tttcttctt	cctccattga	taaaccctat	tctctatagt	900
gtcaagatga	aggagattag	aaagagaata	ctcaacaggt	tgcagcccag	gaaggtgggt	960
ggtgctcag						969

<210> 469

<211> 384

<212> DNA

<213> Unknown (H38g318 nucleotide)

<220>

<223> Synthetic construct

<400> 469

tctcgctcag	atacacaggt	caatgagtta	gtgttattca	ccgtcttttg	ttttattgaa	60
ctgagtagca	tttcaggagt	tttcatttct	tattgttata	tcacccctatc	agtcttggag	120
atacactctg	ctgaggggag	gttcaaagct	ctctctacat	gcacttccca	cttatctgcg	180
gttgcaattt	tccaggggaa	tctgtctctt	atgtatttcc	ggccaagtgc	ttcctattct	240
ctagatcaag	ataaaatgac	ctcattgttt	tacacccttg	tgggtcccat	gttgaacccc	300
ctgatttata	gcctgaggaa	caaggatgtg	aaagaggccc	tgaaaaaact	gaaaaataaa	360
attttatttt	aaggaaatag	taaa				384

<210> 470

<211> 946

<212> DNA

<213> Unknown (H38g319 nucleotide)

<220>

<223> Synthetic construct

<400> 470

atgtttctgc	tcaatacctc	agaagttgaa	gtctccacat	tcctattgat	tgggatacca	60
ggacttgagc	atgcacacat	ttggatctct	atccccatct	gccttatgta	cctcatggcc	120
atcctgggca	actgcacat	cctatttgtt	atcagaacag	agcattccct	gcaagagccc	180
atgtactatt	tcctctccat	gctggccctg	tcagacctgg	gcctgtcttt	ctcctcccta	240
cccacgatgc	tgagaatctt	cttgttcaac	aacatgggga	tttctgctga	tacatgcatt	300
gcccaggaat	tcttcatcca	tggattcaca	gacatggagt	cttcagttct	cctaatacatg	360
tcctttgatc	acttagtagc	catttgcaac	cccctaagat	atagctctat	tctcaccagc	420
ttcaggggtt	tgcaaattgg	actggctttt	gccattaaaa	gcattctcct	agtgtaccac	480
cttttacttt	aaagagactc	agatactgta	ataaacacct	tttatcccac	tcctactgcc	540
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tgctcgttgc	actctgcatg	atgtcagaca	gtgtttttat	tgctatttcc	tatatgtgtt	660
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cttgtctgga	ccacccttga	tgaatcccat	tgtgtattgt	gtaaaaactc	ggcagattag	900
agtaaaggtc	ctggaaaaat	tggctctgaa	gcctaaatga	tggggc		946

<210> 471

<211> 942

<212> DNA

<213> Unknown (H38g320 nucleotide)

<220>

<223> Synthetic construct

<400> 471

atgatggcat	ctgaaagaaa	tcaaagcagc	acacccactt	ttattctctt	gggtttttca	60
gaataccag	aaatccagg	tccactcttt	ctggttttct	tgttcgtcta	cacagtcact	120
gtagtgggga	acttggggcat	gataataatc	atcagactca	attcaaaact	ccatacaatc	180
atgtgctttt	tccttagtca	cttgccttg	acagacttct	gtttttccac	tgtagttaca	240
cctaaactgt	tggagaactt	ggttgtggaa	tacagaacca	tctctttctc	tgggttgcac	300
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gcttatgacc	gttttggtgg	agtttgtaaa	cccttgctgt	ataccactat	tatgtctcag	420
aagctctgtg	ctcttctggt	ggctgggtcc	tatacatggg	ggatagtgtg	ctccctgata	480
ctcacatatt	ttcttcttga	cttatcggtt	tgtgaatcta	ccttcataaa	taattttatc	540
tgtgaccact	ctgtaattgt	ttctgcctcc	tactcagacc	cctatatcag	ccagaggcta	600
tgctttatta	ttgccatatt	caatgagggt	agcagcctaa	ttatcattct	gacatcatat	660
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tccacctgtg	cctccacact	gacagccatc	actatcttcc	atggaactat	ccttttctct	780
tactgtgttc	ctaatectaa	aacttctagc	ctcatagtta	cagtggcttc	tgtgttttac	840
acagtggcga	ttccaatgct	gaacccattg	atctacagcc	ttaggaacaa	agatatcaat	900
aacatgtttg	aaaaattagt	tgtcaccaaa	ttgatttacc	ac		942

<210> 472

<211> 965

<212> DNA

<213> Unknown (H38g321 nucleotide)

<220>

<223> Synthetic construct

<400> 472

cacacagagc	cacggaatca	cacaggggtc	tgagaatttc	tcctcctggg	actctcagag	60
gatccagaac	tgcagccggt	cctcgctttg	ctgtccctgt	ccctgtccat	gtatctggtc	120
acgggtgctga	ggaacctgct	cagcatcctg	gctgtccgct	ctgactcccc	cctccacaac	180
cccatgtact	tcttcctctc	caacctgtgc	tgggctgaca	tcgggttcac	ctcggccacg	240
gttgccaaga	tgattgtgga	atgcagtcgc	atagcagagt	catctctcat	gcgggctgcc	300
tgacgcagat	gtctttcttg	gtcctttttg	catgtataga	aggcatgtct	ctgactgtga	360
tggcctatga	ctgcttttga	gccatctgtc	gtcctctgca	ctaccagtc	atcgtgaatc	420
ctcacctctg	tgtcttcttc	gttttggtgt	cctttttcct	tagcctgttg	gattccacgc	480
tgcacagttc	gattgtgtta	caattcacca	tcatacaaga	tgtggaaatc	tctcattttg	540
tctgtgaccc	ctctcatctt	ctcaaacttg	cctgttctga	cagcgtcatc	aatagcatat	600
tcataatatt	cgatagtact	atgtttgggt	ttcttcccat	ttcagggatc	ccttggtctt	660
actataaaat	cgtccctctc	attctaagga	tttcatcatc	agatgggaag	tataaagcct	720
tcgccacctg	tggctctcac	ctagcagttg	tttgctgatt	tgatggaaca	ggcattggta	780
tgtacctgac	ttcagctgtg	gcaccacccc	ctaggaattg	agtgggtggc	tcagtgatgt	840
aggctgtggt	caccccatg	ctgaaccttt	tcactacag	cctgagaaac	agggacatac	900
aaagtgcctt	gcggaggctg	ctcagcagaa	cagtcgaatt	tcatgatctg	tttcattctt	960
tttct						965

<210> 473

<211> 990

<212> DNA

<213> Unknown (H38g322 nucleotide)

<220>

<223> Synthetic construct

<400> 473

atgtcgggtc	tcaataatac	cattgctgag	cctctgatct	tcctcctgat	gggcattcca	60
ggcctgaaag	ccaccagta	ctggatctcc	atcccttttt	gtctcctata	tgttgttggc	120

gtctctggaa	atagcatgat	cctgtttgtg	gtcctctgtg	aacggagcct	ccataagcct	180
atgtactatt	tcctctctat	gctttcagcc	acagacctga	gcttgteccct	gtgtacactt	240
ttactactacc	ttgggtgtctt	ctgggtttgaa	gcccagagaaa	tcaacctaaa	tgccctgcatt	300
gccacatggt	tctttctaca	cggatttact	tccatggagt	ctgggggttct	actggccatg	360
gcctttgatc	gttttgtggc	catctgttac	ccactgagat	acactaccat	ccttaccat	420
gcccgaattg	ccaagattgg	gatgagcatg	ttgataagaa	atgttgccgt	catgttgcca	480
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ggctctgtttg	cgtttttgtc	cactacaggg	tttgactgcc	cttgcatcct	gctctcctat	660
atcctgatca	ttcgatctgt	cctcagcatt	gcttcctcag	aagagaggcg	gaaagccttc	720
aacacctgca	catccacat	cagtgtctgt	tccatcttct	acctccctct	catcagtttg	780
tctcttgtcc	atcgctatgg	ccattcagca	cctccatttg	tccacatcat	catggccaat	840
gtctttctgc	taatccctcc	tgtgtcaaac	cctattattt	acagtgtaaa	gattaagcag	900
attcaaaagg	ccattatcaa	ggctttaatt	cagaagcact	ccaaatctaa	tcacagcta	960
tttctgatta	gagataaagc	catttatgaa				990

<210> 474

<211> 942

<212> DNA

<213> Unknown (H38g323 nucleotide)

<220>

<223> Synthetic construct

<400> 474

atgatgatgg	ttttaaggaa	tctgagcatg	gagccacact	ttgccctttt	aggtttcaca	60
gattacccaa	agcttcagat	tcctctcttc	cttgtgtttc	tgctcatgta	tgttatcaca	120
gtggtaggaa	accttgggat	gatcataata	atcaagatta	accccaaatt	tcacactcct	180
atgtactttt	tccttagtca	cctctctttt	gttgattttt	gttactcttc	cattgtcact	240
cccaagctgc	ttgagaactt	ggtaatggca	gataaaaagca	tcttctactt	tagctgcattg	300
atgcagtact	tcctgtcctg	cactgctgtg	gtgacagagt	ctttcttctg	ggcagtgatg	360
gcctatgacc	gctttgtggc	catctgcaat	cctctgcttt	atacagtggc	catgtcacag	420
aggctctgtg	cctgtggtgt	ggctgggtca	tatctctggg	gcatgtttgg	ccccttggtg	480
ctcctttgtt	atgctctccg	gttaaaactt	tctggacctc	atgtaataca	ccacttcttt	540
tgtgagtata	ctgctctcat	ctctgtgtct	ggctctgata	tactcatccc	ccacctgctg	600
cttttcagct	tcgccacctt	caatgagatg	tgtacactac	tgatcatcct	cacttcctat	660
gttttcattt	ttgtgactgt	actaaaaatc	cgttctgtta	gtgggcgcca	caaagccttc	720
tccacctggg	cctcccacct	gactgctatc	accatcttcc	atgggaccat	ccttttccct	780
tactgtgtac	ccaactccaa	aaactctcgg	caaacagtca	aagtggcctc	tgtattttac	840
acagtgtgca	accccatgct	gaaccctcgg	atctacagcc	taaggaataa	agacgtgaag	900
gatgctttct	ggaagttaat	acatacacaa	gttccatttc	ac		942

<210> 475

<211> 942

<212> DNA

<213> Unknown (H38g324 nucleotide)

<220>

<223> Synthetic construct

<400> 475

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ccaggcctgg	agagtttcca	gttgtggatt	gcctttccgt	tctgtgccac	gtatgctgtg	120
gctgttgttg	gaaatatcac	tctcctccat	gtaaccagaa	ttgaccacac	cctgcattgag	180
cccatgtacc	tctttctggc	catgctggcc	atcactgacc	tggtcctctc	ctcctccact	240
caacctaaaga	tggttgccat	attctggttt	catgctcatg	agattcagta	ccatgectgc	300
ctcatccagg	tggtcttcat	ccatgccttt	tcttctgtgg	agtctggggg	gctcatggct	360
atggccctgg	actgctacgt	ggctacctgc	ttcccactcc	gacactctag	catcctgacc	420
ccatcggtcg	tgatcaaaact	ggggaccatc	gtgatgctga	gagggctgct	gtgggtgagc	480
cccttctgct	tcatggtgtc	taggatgccc	ttctgccaac	accaagccat	tccccagtca	540
tactgtgagc	acatggctgt	gctgaagttg	gtgtgtgctg	atacaagcat	aagtcgtggg	600

tatgggctct	ttgtggcctt	ctctgtggct	ggctttgata	tgattgtcat	tggtatgtca	660
tacgtgatga	ttttgagagc	tgtgcttcag	ttgccctcag	gtgaagcccg	cctcaaagct	720
tttagcacac	gtgcctocca	tatctgtgtc	atcttggtc	tttatatccc	agcccttttt	780
tctttctca	cctaccgctt	tggccatgat	gtgccccgag	ttgtacacat	cctgtttgt	840
aatctctatc	tactgatacc	tcccatgtc	aaccccatca	tttatggagt	tagaaccaaa	900
cagatcgggg	acaggggttat	ccaaggatgt	tgtggaaaca	tc		942

<210> 476

<211> 860

<212> DNA

<213> Unknown (H38g325 nucleotide)

<220>

<223> Synthetic construct

<400> 476

tatatattgt	tagacatata	tatatgtcta	aacaacactc	atgtctaatt	gtgtgtagag	60
tcactagagg	caatttataa	taagttttta	ttttcttttt	tttctattgg	caataacatg	120
attttagtga	taaattttta	taattatgaa	aacataacag	tactttttta	aacataaaca	180
tttaaagaaa	aagttttcat	gattctttgta	tacatcttaa	catacatact	ctccctttta	240
agtaagttct	ttgcattggt	taaatctttg	cagacaaagc	ttttcaagag	caagtcagtg	300
gaaactagta	gagcaggagt	tgagaaagcc	ctgtgcatta	tacactcacc	atgtcccaga	360
agttttgtct	catccatcca	gcaggatggt	agaccagggc	atataatcta	tccccgggtca	420
ctcattttct	cattgtattg	cctattgtgg	gcacaatgta	gttaatatat	tttaaaataa	480
atattctgtt	gccatttcag	attcgtgagt	tcactctggat	agcggatttt	tgtttgtttg	540
tttgttttgc	tttagtcaat	tttgattaat	taaggaatct	cagagtcctc	actccttagc	600
tttcattttc	aacttgtcta	aaaggcactt	tctgccagtg	cacatcaacc	ttctccaccc	660
atttcccaca	tttccaccat	ccttcctcac	tctagtgcac	taactccaaa	aactcacagg	720
caactgtgaa	agcacactct	gtatgttatg	ccatgttaat	ccccatgctg	aactcacaga	780
cttgtagcat	gcggtacaaa	aatgtgaatg	aatctctgca	gaagctgatg	gacttcaaaa	840
tattttagca	ttgaaagcaa					860

<210> 477

<211> 966

<212> DNA

<213> Unknown (H38g326 nucleotide)

<220>

<223> Synthetic construct

<400> 477

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gaggatccag	aactgcagcc	cgctcctcgt	gggctgtccc	tgtccatgta	cctgggtcacg	120
gtgctgagga	acctgtcat	catcctggct	gtcagctctg	actcccacct	ccacaccccc	180
atgtacttct	tcctctccaa	cctctcctgg	gctgacattg	gtttcacctc	ggccattggt	240
cccaagatga	ttgtggacat	gcagtcgcac	agcagagtca	tctcttaagc	gggctgcctg	300
acacagatgt	ctttctttgt	cctttttgca	tgtatagaag	acatgtctct	gactgtgatg	360
gcctatgacc	aatttgtggc	catctgtcac	ccctgcacta	cccagtcac	atgaatctc	420
acctctgtgt	cttcttagtt	ttgggtttct	ttttccttag	cctgttggat	tcccagctgc	480
acagttggat	tgtgttacaa	ttcaccttct	tcaagaatgt	ggaaatctct	aattttttct	540
gtgatccatc	tcaacttctc	aaccttgcct	gttctgacgg	catcatcaat	agcatattta	600
tatatattaga	tagtattctg	ttcagttttc	ttcccatttc	agggatcctt	ttgtcttact	660
ataaaattgt	ccctccatt	ctaagaattt	catcgtcaga	tgggaagtat	aaagccttct	720
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acctaacttc	agctgtgtca	ccacccccag	gaatgggtgtg	gtggcgtcag	tgatgtatgc	840
tgtgggcacc	cccatgctga	actcttttat	ctacagcctg	agaaacaggg	acattcaaag	900
cgccctgtgg	aggctgcgca	gcagaacagt	cgaatctcat	gatctgttcc	atccttatcc	960
ttgtgt						966

<210> 478

<211> 951

<212> DNA

<213> Unknown (H38g327 nucleotide)

<220>

<223> Synthetic construct

<400> 478

atgcaacccat	ataccaaaaa	ctggaccag	gtaactgaat	ttgtcatgat	gggctttgct	60
ggcatccatg	aagcacacct	cctcttcttc	atactcttcc	tcaccatgta	cctgttcacc	120
ttgggtggaga	atttggccat	catttttagtg	gtgggttttg	accaccgact	acggagaccc	180
atgtatttct	tcctgacaca	cttgctctgc	cttgaaatct	ggtacacttc	tggttācagt	240
cccaagatgc	tggctgggtt	tattgggggtg	gatgggtggca	agaatatctc	ttatgctggg	300
tgccatatecc	agctcttcat	cttcaccttt	cttggggcaa	ctgagtgttt	cctactggct	360
gccatggcct	atgategtta	tgtggccatt	tgtatgcctc	tccactatgg	ggctttttgtg	420
tcctggggca	cctgcatccg	tctggcagct	gcctgttggc	tggttaggttt	cctcacaccc	480
atcttgccaa	tctacctctt	gtctcagcta	acattttgtg	gccccaatgt	cattgaccat	540
ttctcctgtg	atgcctcacc	cttgctagcc	ttgtcgtgct	cagatgtcac	ttggaaggag	600
actgtggatt	tcctgggtgc	tctggctgtg	ctactggcct	cctctatggg	cattgctgtg	660
tcctatggca	acatcgtctg	gacactgctg	cacatccgct	cagctgctga	gcgctggaag	720
gccttctcta	cctgtgcagc	tcacctgact	gtgggtgagcc	tcttctatgg	cactcttttc	780
tttatgtatg	tccagaccaa	ggtgacctcc	tccatcaact	tcaacaaggt	ggtatctgtc	840
ttctactctg	ttgtcacgcc	catgctcaat	cctctcatct	acagtcttag	gaacaaggaa	900
gtgaagggag	ctctgggtcg	agtcttttct	ctcaactttt	ggaagggaca	g	951

<210> 479

<211> 936

<212> DNA

<213> Unknown (H38g328 nucleotide)

<220>

<223> Synthetic construct

<400> 479

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tgggagatcc	agctcctcct	cctagtgttt	tcctctgtgc	tctatgtggc	aagcattact	120
ggaaacatcc	tcattgtgtt	ttctgtgacc	actgaccctc	acttacactc	ccccatgtac	180
tttctactgg	ccagtctctc	cttcattgac	ttaggagcct	gctctgtcac	ttctcccaag	240
atgatttatg	acctgttcag	aaagcgcaaa	gtcatctcct	ttggaggctg	catcgctcaa	300
atcttcttca	tccacgtcgt	tgggtgggtg	gagatgggtg	tgctcatagc	catggccttt	360
gacagatatg	tggccctatg	taagccctc	cactatctga	ccattatgag	cccaagaatg	420
tgcccttcat	ttctggctgt	tgcctggacc	cttgggtgtca	gtcactccct	gttccaactg	480
gcatttcttg	ttaatttacc	cttctgtggc	cctaagtgtg	tggacagctt	ctactgtgac	540
cttcctcagc	ttctcagact	agcctgtacc	gacacctaca	gattgcagtt	catggctcact	600
gttaacagtg	gggttatctg	tgtgggtact	ttcttcatac	ttctaattctc	ctacatcttc	660
atcctgttta	ctgtttggaa	acattcctca	ggtgggttcat	ccaaggecct	ttccactctt	720
tcagctcaca	gcacagcggt	cctttttgtt	tttgggtccac	ccatgtttgt	gtatacatgg	780
ccacacccta	attcacagat	ggacaagttt	ctggctattt	ttgatgcagt	tctcactcct	840
tttctgaatc	cagttgtcta	tacattcagg	aataaggaga	tgaaggcagc	aataaagaga	900
gtatgcaaac	agctagtgat	ttacaagaag	atctca			936

<210> 480

<211> 668

<212> DNA

<213> Unknown (H38g329 nucleotide)

<220>

<223> Synthetic construct

<400> 480

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aggaacccca	tcatgacctc	gtgtttctgt	ggctttctag	ttttgtcttt	tttttttttt	120

ttctcagtc	tttagacgcc	cagctgcaca	acttgattgc	cttacaaatg	acctgcttcc	180
aggatgcgga	aattcctagt	ttcttctgtg	acccttctca	actcccccat	cttgcattgt	240
gtgacacctt	caccaataac	ataatcatgt	atttgcttgc	tgccatattt	ggttttcttc	300
ccatctcggg	gaccttttct	tcttactata	aaattgtttc	ctccattctg	agggtttcat	360
catcacgtgg	gaagtataag	gccttctcca	cctgtgggtc	tcacctgtca	gttgtttgct	420
gattttacgg	aacaggcttt	ggagggtacc	tcagttcaga	tgtgtcatct	tccccgagaa	480
aggctgcagt	ggcctcagtg	atgtacacgg	tgatcacctc	catgctgaac	cccttcattc	540
acagcctgag	aaacagggat	attaaagggtg	tcttgccgca	gccgcacggc	agcaccgtcc	600
aatttcagta	tcttcttatt	tgttccattc	cttttgtagt	gtgggttaaa	aaaggcagca	660
aggtcaaa						668

<210> 481

<211> 840

<212> DNA

<213> Unknown (H38g330 nucleotide)

<220>

<223> Synthetic construct

<400> 481

atgtacctgg	tcacgggtgt	gaggaacctg	ctcatcatcc	tggtgtgcag	ctctgactcc	60
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acctcggcca	tggttcccaa	gatgattgtg	gacatgcagt	cgcatagcag	agtcattctc	180
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ctcctgacag	tgatggccta	tgaccgattt	gtggccatct	gtcacccctc	gcactacca	300
gtcatcatga	atcctcacct	tggtgtcttc	ttagtttttg	tgctcttttt	cctcagcctg	360
ttggattccc	agctgcacag	ttggattgtg	ttacaattca	ccttcttcaa	gaatgtggaa	420
atctccaatt	ttgtctgtga	cccattctca	cttctcaacc	ttgcctgttc	tgacagtgtc	480
atcaatagca	tattcatata	tttagatagt	attatgtttg	gttttcttcc	catttcaggg	540
atccttttgt	cttaagctaa	caatgtcccc	tccattctaa	gaatttcatt	atcagatagg	600
aagtctaaag	ccttctccac	ctgtggctct	cacctggcag	ttgtttgctt	attttatgga	660
acaggcattg	gcgtgtacct	gacttcagct	gtgtcaccac	cccccaggaa	tggtgtgggtg	720
gcatcagtga	tgtacgctgt	ggtcaccccc	atgctgaacc	ctttcatcta	cagcctgaga	780
aatagggaca	ttcaaagtgc	cctgtggagg	ctgcgcagca	gaacagtcga	atctcatgat	840

<210> 482

<211> 924

<212> DNA

<213> Unknown (H38g331 nucleotide)

<220>

<223> Synthetic construct

<400> 482

atggaaacac	agaacctcac	agtgggtgaca	gaattcattc	ttcttgggtc	gacctcagtc	60
caagatgctc	aacttcttgt	ctttgtgcta	gtcttaattt	tctaccttat	catcctccct	120
ggaaatttcc	tcatcatttt	caccataaag	tcagaccttg	ggctcacagc	ccccctctat	180
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atgttgggtg	acttctcttc	tgagaagaag	gtaattctct	atagaagctg	catcactcag	300
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gaccgctaca	tcgccatctg	ccggccttta	cactattcaa	ccatcatgaa	ccctagagcc	420
tgctatgcat	tatcgtttgt	tctgtggctt	gggggcttta	tccattccat	tgtacaagta	480
gcccttatcc	tgcacttgcc	tttctgtggc	ccaaaccagc	tcgataactt	cttctgtgat	540
gttccacagg	tcataaagct	ggcctgcacc	aatacctttg	tggtggagct	tctgatgggtc	600
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atcctctgtc	gtataaggga	gcactcctct	gaaggaaaga	gcaaggctat	ttccacatgc	720
accaccata	ttatcattat	atttctcatg	tttggacctg	ctatttttcat	ctacacttgc	780
cccttccagg	ctttccagc	tgacaaggta	gtttctcttt	tccatactgt	catctttcct	840
ttgatgaacc	ctgttattta	tacgttctgc	aaccaggagg	tgaaagcttc	catgaggaag	900
ttgttaagtc	aacatatgtt	ttgc				924

<210> 483
 <211> 457
 <212> DNA
 <213> Unknown (H38g332 nucleotide)

<220>
 <223> Synthetic construct

<400> 483
 gggatgagaa aggaacaagc tgtctgtggt agtcatccat gattgagatg atgtgtggac 60
 cctgagtcag actacctggg tcaaatgcag gctctctact ttttaccat ttgatcttgg 120
 cctgtggctc tctacttctt atccatttca tcttggactt gtggcctctc atacctcatc 180
 ttctttacag tcttccatat gaaatcccc taaagtagga acaaagcttt ggccaactgc 240
 tcttcccatc tttccgtggg ctttacttag gaactgtgtg tttaatatac gtgacacagg 300
 gtttttccca catccctgag cagaaacaag ctgtgtctgt attttgcact gtactcacc 360
 ccatgctaaa cccctcatc tacatcctga gaaacaagga tgtggtggg ctcttcagaa 420
 agttctggga acacatcaag tctctaaaca gaacaca 457

<210> 484
 <211> 972
 <212> DNA
 <213> Unknown (H38g333 nucleotide)

<220>
 <223> Synthetic construct

<400> 484
 atgtctttct tctttgtaga cttaagaccc atgaacaggt cagcaacaca catcgtgaca 60
 gagttttattc tcttgggatt ccctgggttg tggaagattc agatttttct cttctcattg 120
 tttttgggtga tttatgtctt gaccttgctg ggaaatggag ccatcatcta tgcagtgaga 180
 tgcaaccac tactacacac ccccatgtac tttctgctgg gaaattttgc ctctcttgag 240
 atctggtatg tgtctccac tattcttaac atgctagtca acattctctc caagaccaag 300
 gccatctcat tttctgggtg cttctccag ttctatttct tcttttctact gggaacaact 360
 gaatgtctct tttctggcagt aatggcttat gatcgatacc tggccatctg ccaccactg 420
 cagtaccctg ccatcatgac tgtaagggtc tgtggtaagc tgggtgtctt ctgttggctt 480
 attggattcc ttggataccc aattcccat ttctacatct cccaactccc cttctgtggg 540
 cctaatatca ttgatcactt cctgtgtgac atggacccat tgatggctct atcctgtgcc 600
 ccagctccca taactgaatg tattttctat actcagagct cccttgctct ctttttctact 660
 agtctgtatg ttcttcgac ctatatata ttactaacag ctgtttttca ggtcccttct 720
 gcagctgggc ggagaaaagc cttctctacc tgtggttctc atttggtgtg ggtatctctt 780
 ttctatggga cagtcatggt aatgtatgta agtcctacat atgggatccc aactttattg 840
 cagaagatcc tcacactggt atattcagta acgactctc tttttaatcc tctgatctat 900
 actcttcgta ataaggacat gaaactcgt ctgagaaatg tctgttttg aatgagaatt 960
 cgtcaaaatt cg 972

<210> 485
 <211> 945
 <212> DNA
 <213> Unknown (H38g334 nucleotide)

<220>
 <223> Synthetic construct

<400> 485
 atggccaaca tcaccaggat ggccaaccac actggaaaagt tggatttcat cctcatggga 60
 ctcttcagac gatccaaaca tccagctcta cttagtgtgg tcatctttgt ggttttctctg 120
 aaggcggtgt ctggaaatgc tgtctgac cttctgatac actgtgacgc ccacctccac 180
 agccccatgt actttttcat cagtcaattg tctctcatgg acatggcgta catttctgtc 240
 actgtgccca agatgtcctt ggaccagggtc atgggtgtga ataaggctct agccctgag 300
 tgtgggatgc agatgttctt ctatctgaca ctaggagggt cggaattttt ccttctagcc 360
 accatggcct atgaccgcta cgtggccatc tgccatcctc tccgttacc tgtcctcatg 420

aaccataggg	tctgtctttt	cctggcatcg	ggctgctggt	tcctgggctc	agtggatggc	480
ttcatgctca	ctcccatcac	catgagcttc	cccttctgca	gatcctggga	gattcatcat	540
ttcttctgtg	aagtccttgc	tgtaacgata	ctgtcctgct	cagacacctc	actctatgag	600
accctcatgt	acctatgctg	tgtcctcatg	ctcctcatcc	ctgtgacgat	catttcaagc	660
tcctattttac	tcatcctcct	caccgtccac	aggatgaact	cagcagaggg	ccggaaaaag	720
gcctttgcc	cctgtcctc	ccacctgact	gtggctcatcc	tcttctatgg	ggctgccgtc	780
tacacctaca	tgtccccag	ctcctaccac	accctgaga	aggacatgat	ggtatctgtc	840
ttctatacca	tcctcactcc	ggtgctgaac	cctttaatct	atagtcttag	gaataaggat	900
gtcatggggg	ctctgaagaa	aatgttaact	gtgagattcg	tcctt		945

<210> 486

<211> 759

<212> DNA

<213> Unknown (H38g335 nucleotide)

<220>

<223> Synthetic construct

<400> 486

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gattatctca	tgggagaggg	gaccatctct	ttcatcgcc	gcactgctca	gtgctttctc	120
tacatggggt	ttatgggggc	tgaattcttc	ctgctggggc	tcattggccta	tgaccgctac	180
gtggccatct	gcaaccact	gcgtatcct	gtcctcatca	gctggcgggt	ctgctggatg	240
atcctggcca	gctcttggtt	cggtggggct	ttggacagtt	ttctcctcac	ccccattacc	300
atgagtctcc	cgttctgtgc	ctctcaccaa	atcaatcact	ttttctgtga	ggcaccacc	360
atgctgaggg	tggcctgtgg	ggacaaaacc	acctatgaaa	cagtgatgta	tgtgtgctgc	420
gttgcaatgc	tgtgatccc	cttctcgggt	gtgactgcat	cctacaccag	gattctcatc	480
acagtgcata	agatgacatc	ggctgaagg	aggaagaagg	cctttgccac	ctgctcttca	540
cacatgatgg	tgggtgacatt	gttctatggg	gctgccttgt	atacgtatac	gcttccccaa	600
ttttaccaca	ccccaatcaa	agataagggt	ttctctgcct	tttataccat	cctcacaccc	660
ttattaaacc	ctctcatcta	cagtctgagg	aacagggtatg	tgatgggtgc	cttgaagaga	720
gttgtggcaa	gatgttaggg	gacatgtggt	gtgatgagg			759

<210> 487

<211> 857

<212> DNA

<213> Unknown (H38g336 nucleotide)

<220>

<223> Synthetic construct

<400> 487

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ttttttttgt	ccccctcatg	cccatctcct	atcgagtggt	ctaagagtgc	agtcagcttc	120
gtgtcacaga	gcaggcgc	tagatttttg	ggctgtgaca	ttcaaacggg	atgtgttctc	180
gggcccctgg	gggaactgaa	gcccttctct	ttggttttat	gtcttatgat	cgctatgtag	240
ctatctgtca	ccctttacat	tatctatgct	ttatgagcaa	gaagatctgc	tgcctcatgg	300
ttgcatgtgc	atgggcccag	ggttctatca	atgctttcat	acatacattg	tatgtgtttc	360
agcttccatt	ctgtaggtct	cggtcatta	accacttttt	ctgtgaagtt	ccagctctac	420
tatcattggt	gtgtcaggac	acctcccagt	atgagtatac	agtcctcctg	agtggactta	480
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tattccagat	gagctcagga	aaaggacagg	caaaagctgt	ttccacttgt	tcctccacc	600
tgattgtggc	aagcctgttc	tatgcaacca	ctctctttac	ctacacaagg	ccacactcct	660
tgcgttcccc	ttcacgggat	aaggcggtgg	cagtatttta	caccattgtc	acacctctac	720
tgaacccatt	tatctacagc	ctgagaaata	aggaagtgc	gggggcagtg	aggagactgt	780
tgggatattg	gatatgctgt	agaaaatatg	acttcagatc	tctgtattga	ttgagcatta	840
acaacataaa	aagctgt					857

<210> 488

<211> 812

<212> DNA

<213> Unknown (H38g337 nucleotide)

<220>

<223> Synthetic construct

<400> 488

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agaagggaca ttttctattt tgccttcatt tgtagctatt catgactgac tctccgttct      60
tttgtctact tgttcatccg tccatccatc catccatcca tccactcagc cattcttttg      120
ttcaacagtg atttactgaa ttccttacta tgactcttct atatttgaca tgccacacga      180
tggtcagcaa tgacttctac tcaagagcta gtttttagtt tcacactgct tttctcttgt      240
tctttatctt ttgcttttgt agctcagaac agaaaaatct atagaaaaga tcttgetacc      300
aggctatggg accctcttgt ccatggcgat atcttactgt ctttgtgtct ttgggctgag      360
caatcctgca gcatgggtga tgctcaataa tgctcatgga acaaaatggg gtgggttcctc      420
ttccaggaag tgctgccatc tctcttttga ttgagaatag gtttacctag gtgattacat      480
cactaacatt gtattcctgt gatttcttcc tcatgatagg acagatttta ctaaaaagtc      540
aaaaattatt tattacatta tgccgttcct cttacttttc atgccagatt aaattttctt      600
ggtccttcaa tgcccacttc taatatcaat aaacaagtaa cctttcccca acctactgaa      660
gtcgccatgt ggaattggtc attctttctg ttgattccat atcatccctc tcattcttct      720
gtctgcccgt ttgtccatcc atttatccat ccacttagct attcgttcgt tcaacaatga      780
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<210> 489

<211> 931

<212> DNA

<213> Unknown (H38g338 nucleotide)

<220>

<223> Synthetic construct

<400> 489

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atgtcattag ctgaaggaaa tcagagttct ggagccgcat ttaccctctt gggcttctca      60
gaatatgcag acctccaggt tcctctgttc ctggtcttcc tgaccatcta cacaatcact      120
gtattgggaa acctgggcat gatcatgac atcaggatca accccaaact ccacaccgc      180
atgtactttt tctcagcca cttgtccttt gttgatttct gttattccac cacagttaca      240
cccaaactgc tggagaactt ggttgtggaa gacagaacca tctccttcac aggatgcac      300
atgcaattct tcctggcgtg tatatgtgca gtggcagaaa cattcatgct ggcagtgatg      360
gcctatgatt gatacgtggc ggtgtgtaac cctttgtctc acacagttgt cagggtccag      420
aaactctgtg catcattagt ggcagggccc tacacatggg gtataatctc ttctctgaca      480
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tgtgagcact ctgtcatcat ctctgtctcc tgccttgacc cctacatcag ccaaatgctt      600
tgttttgtca ttgcaatatt caatgaggtg agcagcttgg gagtcacct cactacctat      660
attttcatct ttattgctgt cataaaaatg ccttctgctg ttgggcacca aaaagcttct      720
tctacctgtg ctccccacct gactgccatc actattttcc acgggactgt cctgttcctt      780
tattgtgtac ccaactccaa aaactcatgg ctcatagtca aagtaggttc tgtgttttat      840
acagtcatca tccccacgtt gaacccttta acctacagcc tcaggaacaa agacgtgaaa      900
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<210> 490

<211> 651

<212> DNA

<213> Unknown (H38g339 nucleotide)

<220>

<223> Synthetic construct

<400> 490

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ttcttggtcc tttttgcatg tatagaagac atgttctctga ctgtgatggc ctatgactgc      60
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ttcttcattt tgggtgcctt tttccttagc ctgttggatt ccagctgca tagctggatt      180
gtgttacaat tcaccatcat caagaatgtg gaagtctcta attttgtctg tgaccctct      240
caacttctca aacttgccctg ttctgacagc gtcatcaata gcatattcat atatttcgat      300

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aatactatgt	ttggttttct	tcccatttca	gggatccttt	ggctttacta	taaaatcgtc	360
ccctacattc	tcaggatttc	atcgtcagat	gggaagtata	aagccttcgc	cacctgtggc	420
tctcacctgg	cagttgcttg	ctgattttat	ggaacaggca	ttggcatgta	cctgacttca	480
gctgtgtcac	cacccccccag	gaatgggtgtg	gtggcatcag	tgatgtacgc	tgtgggtcacc	540
cccattgctga	acctttttat	ctacagcctg	agaaacaggg	acatacaaag	tgccctgcgg	600
aggctgcgcc	ccagaacagt	cgaatctcat	gatctgttcc	atcctttttc	t	651

<210> 491

<211> 933

<212> DNA

<213> Unknown (H38g340 nucleotide)

<220>

<223> Synthetic construct

<400> 491

atgggcaagg	aaaactgcac	cactgtggct	gagttcattc	tccttggact	atcagatgtc	60
cctgagttga	gagtctgcct	cttctgtctg	ttccttctca	tctatggagt	cacgtttgta	120
gccaatctgg	gcatgactgc	actgattcag	gtcagctctc	ggctccacac	ccccgtgtac	180
tttttctca	gccacttgct	ctttgtagat	ttctgtact	cctcaataat	tgtgccaaag	240
atgttggtta	atatctttaa	caaggacaaa	gccatctcct	tcctaggggtg	catgggtgcaa	300
ttctacttgt	tttgacacatg	tggagtcact	gaggtcttcc	tgctggccgt	gatggcctat	360
gaccgctttg	tggccatctg	taacccccctg	ctgtacatgg	tgaccatgtc	tcagaagctg	420
cgtgtggagc	tgacctcttg	ctgtactctc	tgtgggacgg	tgtgttctct	gattcactcg	480
tccttagctc	ttaggactct	cttctataga	tctaattgtga	ttaaccactt	cttctgtgat	540
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ctggtggcca	ctttgaatga	gagtgttacc	atcatgatca	tcctcacctc	ctacctgcta	660
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tgtgcctccc	acctcacagc	catcactgtc	tcccatggaa	caatccttta	cattttattgc	780
aggccgagtt	caggcaacag	tggagatggt	gacaaagtgg	ccaccgtgtt	ctacacagtt	840
gtgattccca	tgtctgaacc	cctgatctac	agcctgagaa	ataaggatgt	gaacaaagct	900
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<210> 492

<211> 963

<212> DNA

<213> Unknown (H38g341 nucleotide)

<220>

<223> Synthetic construct

<400> 492

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gtggtaggga	atcttgggat	gatagtgate	atcaaaaatta	acccaaaatt	gcataccccc	180
atgtattttt	tcctcaacca	cctctccttt	gtggatttct	gctattcctc	catcattgct	240
cccatgatgc	tgggtgaacct	ggtttagaaa	gatagaacca	tttcattctc	aggatgtttg	300
gtgcaattct	ttttcttttg	cacctttgta	gtgactgaat	taattctatt	tgcgggtgatg	360
gcctatgacc	actttgtggc	catttgcaat	cctctgctct	acacagttgc	catctcccag	420
aaactctgtg	ccatgctggt	ggttgtattg	tatgcatggg	gagtcgcagt	ttccctgaca	480
ctcgcgtgct	ctgctttaa	gttatctttt	catggtttca	acacaatcaa	tcatttcttc	540
tgtgagttat	cctccctgat	atcactctct	taccctgaat	cttatctcag	ccagttgctt	600
cttttctactg	ttgccacttt	taatgagata	agcacactac	tcattcattct	gacatcttat	660
gcattcatca	ttgtcaccac	cttgaagatg	ccttcagcca	gtgggcaccg	caaagtcttc	720
tccacctgtg	cctcccacct	gactgccatc	accatcttcc	atggcaccat	cctcttccctc	780
tactgtgtac	ccaactccaa	aaactccagg	cacacagtc	aagtggcctc	tgtgttttac	840
accgtggtga	tcctctgtgt	gaatccccctg	atctacagtc	tgagaaataa	agatgttaag	900
gatgcaatcc	gaaaaataat	caatacaaaa	tattttcata	ttaaacatag	gcattgggat	960
cca						963

<210> 493

<211> 303
 <212> DNA
 <213> Unknown (H38g342 nucleotide)

<220>
 <223> Synthetic construct

<400> 493
 tggtgcccac tccaccacca ttacctgcct agacagtcac tggatcagct cacatactta 60
 attgctttga ttttcaattt tctctttggt tttggcctcc agagtccctt tattttctta 120
 aaggcatgac agtgctttcc aaaggatata cactatattt tctgtaaggc gagaagggct 180
 tcagggtatc taacctacca tattgctgga aatagaagtt aaaccgtttt tttcctagtc 240
 tgtaactgcc actattatgg tgatgatata ggctaagctc gaatatttta tgtgaacata 300
 tta 303

<210> 494
 <211> 957
 <212> DNA
 <213> Unknown (H38g343 nucleotide)

<220>
 <223> Synthetic construct

<400> 494
 atgcctgtgg ggaaacttgt cttcaaccag tctgagccca ctgagtttgt gttccgtgcg 60
 ttcaccacag ccactgaatt ccagggttctt ctcttccttc tcttcctcct cctctacttg 120
 atgacccctc gtggcaacac agccatcctc tgggtggtgt gcacacacag caccctccgc 180
 accccgatgt atttcttctt gtccaacctg tctttcctgg aactctgcta caccaccgtg 240
 gtagtacctt tgatgctttc caacatthttg ggggcccaga agcccatttc gttggctgga 300
 tgtggggccc aaatgttctt ctttgtcacc ctccggcagca cggactgttt cctcttggcg 360
 atcatggcct atgaccgcta tgggtgctatc tgccaccgcg tgcactacac cctcatcatg 420
 acccgcgagc tgtgcacgca gatgctgggt ggggcccctg gcctggccct cttcccctcc 480
 ctgcagctca ccgccttaat cttcaccttg cctttttgct gccaccacca ggaaatcaac 540
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 caggtctgtc tctatgtcgt gagcatcctc gtgctgacca tccccttctt gctcatctgc 660
 gtctcctacg tgttcatac cttgtgccatc ctgagcatcc gttctgcccga gggccgccc 720
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 agcctcgtgt acctgcgtcc tccgtccagc acctcagagg atgaggacag ccaaatacgcg 840
 ttggtctaca cctttgtcac ccccttactc aaccttttgc ttacagcct taggaacaag 900
 gatgtcaaag gtgctctgag gagtgccatt atccgtaaaag cagcctctga cgccaac 957

<210> 495
 <211> 624
 <212> DNA
 <213> Unknown (H38g344 nucleotide)

<220>
 <223> Synthetic construct

<400> 495
 atggagctgg agaatggcac tgtgaagact gggttctttc tcttgggatt cagcgaccat 60
 ctggaacttc agagtctcct ttttgcagaa tttttttcca tctactctgt tactctgatg 120
 gggaaccttg gaatgatttt attaatcaca atcagttccc acttgacacac tctatgtatg 180
 tttttctctt gtgtgtttgc cttcatagat gcatgctact cttctgtcat tgctcccaaa 240
 ttacttgtga acttggtttc tgaaaagaag accatttctt acaatggctg tgttgacacag 300
 ttatatttct tctgctcttt agttgacaca gaatctttcc tcttggctgc catggcttaa 360
 gaccggtaca tagcaatctg taaccgctg ctctatacag tgattatgtc caagaaggtt 420
 tgttgccagc ttgcaattgg agcatttttg gggggcacta tgagctcaat tattcatacc 480
 accaactctt tccatctgtc attctgtctc agagatatta accatttctt ttgtgatata 540
 tccccactct tctctctgtc ctgcactgac acatacatgc atgacatcat tctggtggtc 600
 tttgccagtt ttgtggaagc aatc 624

<210> 496
 <211> 963
 <212> DNA
 <213> Unknown (H38g345 nucleotide)

<220>
 <223> Synthetic construct

<400> 496

cacacagagc	cacggaatct	cacaggtgtc	tcagaattcc	tcctcctggg	actctcagag	60
gatccagaac	tgcagcctgt	cctccctggg	ctgtccctgt	ccatgtatct	gctcacgggtg	120
ctgaggaacc	tgctcatcat	cctggctgtc	agctctgact	cccacctcca	cacccccatg	180
tacttcttcc	tctccaaccc	gtcatgggct	gacatcgctt	tcacctcggc	cacagttccc	240
aagatgattg	tgacatgca	gtcgcatagc	agtcactctct	tatgcaagct	gcctgacaca	300
gatgtctttc	tttgcccttt	ttgcatgcat	agaagatcat	gctcctgatt	gtgatggcct	360
atgaccgatt	tgtagccgtc	tgctactccc	cacactaccc	agtcatcatg	aatcctcgcc	420
tcgggtgtctt	cttcgttttg	gtgtcctttt	tccttagcct	gttggtattcc	cagctgcaca	480
gttggtactgt	gttacaattc	accttcttca	agaatgtgga	aatctctaata	tttgtctgtg	540
acccatctca	acttctcaac	cttgccctgtt	ctgacagcgt	catcgatagc	atattcatat	600
atntagatag	tactatgttt	cgttttcttc	cgatttcagg	gacccctttg	tcttactcta	660
acattgtccc	tcaccattca	agaatttcat	catcagatgg	gaagtctaaa	gccttctcca	720
cctgtcgtctc	tcacctggca	gttggttgct	tattttatgg	aacaggcatt	ggcgtgtacc	780
tgacttcagc	tgtggcacca	ccccaggag	tgggtgtggtg	gtgtcagtga	tgtacactgt	840
ggtcaccccc	atgctgaacc	ctttcatcta	ctgcctgaga	aacagggaca	ttcaaagcgc	900
cctgtggagg	ctgcgcagca	gaacagtcga	atctcatgat	ctgttccatc	ctttttcttg	960
tgt						963

<210> 497
 <211> 932
 <212> DNA
 <213> Unknown (H38g346 nucleotide)

<220>
 <223> Synthetic construct

<400> 497

gaaaagaatc	tcattctctat	gaatgggttt	atgaacttca	ctgattaccc	agagttggaa	60
atgcccttgt	tcttagtggt	tctcagttgc	ttcctggcca	ttattttgag	aaatatggaa	120
tgggtcattc	tgaccaagt	gaatgtgcat	ctcttcaccc	tatatacttc	ttcctaacaa	180
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gcaagacaac	catttctctat	ggccgcta	aaaagcaatg	aggtcctttt	tcttcatattg	300
tgtaggaact	tagtgtttcc	tgccaacagc	aatgaccata	agcagccac	tgccccacac	360
tacaagccat	gaacttcaag	acatgttggg	gttttttttt	ggtggggatt	tgttggtgta	420
catgctgggt	tttgatgggtg	aacgtggtga	atgcctacac	ctgaggacta	tcaggagcca	480
ctttcaacac	catctgcaca	tttgcccgct	tcttctgtga	tgacaattag	atcaaattct	540
gtcacatcct	gcccctgctg	aagctcattt	gaaatacttc	aggaaacagc	aagataatta	600
ttgtgatctt	tgacagcttt	tatgattata	gctggcacta	gggtcatcct	gatctcttac	660
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catccacttg	tgcttccac	ctaactgcta	tgaccttctt	ttgggatccc	catcttcaga	780
catgtgaagt	acctcagata	aatcactgac	agaagacaag	ttggcatcat	gacttgcacc	840
atctttatct	ctatgctaga	acttttgatc	caaagtctaa	agaaggatat	acaagttgcc	900
ttcaaaaagg	ccataggtaa	cttctgggtt	tt			932

<210> 498
 <211> 1005
 <212> DNA
 <213> Unknown (H38g347 nucleotide)

<220>
 <223> Synthetic construct

<400> 498

tctacagacc	cacagaatct	aacagatgtc	tctatatccc	tcctccgaga	acctcagagg	60
atccagaatg	gcagctgggc	cttgctgggt	tgttcctgtc	catgtgcctg	gtaacgggtg	120
tggggaacct	gctcatcatc	ctggccgtca	gccttgactc	ccacctccac	acccccatgt	180
actttcttct	ctccaacctg	tccttgccctg	acatcggttt	cacctccacc	acggtagcca	240
agatgattgt	ggacatccaa	tctcacagca	gagtcattct	ctatgcaggc	tgcttgactc	300
agatgtctcc	ctttgccatt	tttggagtca	tggaagagag	acacgctcct	gagtgtgatg	360
gcctctgacc	gctttgtagc	catctgtcac	cctctatatc	attcagccat	catgaacccg	420
tgtttctgtg	gctttctagt	tttgttgtct	tttttttttt	tttctgtctt	tttagtgccc	480
agctgcacaa	cttgattgcc	ttacaaatga	cctgcttcaa	ggatgtggaa	attcctaatt	540
tcttctgtga	cccttctcaa	ctcccccatc	ttgcatgttg	tgacaccttc	accaataaca	600
taatcatgta	tttccctgct	gccatatttg	gttttcttcc	catctcgggt	tcctttttct	660
cttactataa	aattgtttcc	tccattctga	gggtttcatc	atcagggtggg	aagtattagg	720
ccttctcctc	ctgttggtct	cacctgtcag	ttgtttgctg	attttatgga	acaggcggtg	780
gaggtacctc	agttgagatg	tgatcatctc	cccaggaag	gttgcatggg	cctcagtgat	840
gtacatggtg	gtcaccctta	tgctgaaccc	ctttgtctac	agcctgagaa	acagggatat	900
taaaagtgtc	ctgcgggtgg	cgcacggcag	cacggtctaa	tctcaatatc	ttcttatctg	960
ttccattcct	tttgtagtgt	aggttaaaaa	ggcagcaagg	tcaaa		1005

<210> 499

<211> 975

<212> DNA

<213> Unknown (H38g348 nucleotide)

<220>

<223> Synthetic construct

<400> 499

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accatcactg	aattcattct	cctgggattt	ttcaagcagg	atgagcatca	aaacctcctc	120
tttgtgcttt	tcttggttat	gtacctgggc	actgtgattg	ggaacgggct	catcattgtg	180
gctatcagct	tggtatacgt	ccttcatacc	cccatgtatc	tcttccttgc	caatctatcc	240
tttgctgata	tttcctccat	ttccaactca	gtccccaaaa	tgctgggtgaa	tattcaaacc	300
aagagtcaat	ccatctctta	tgagagctgc	atcacacaga	tgtacttttc	tattgtgttt	360
gtcgtcattg	acaatttgct	cttggggacc	atggcctatg	accactttgt	ggcgatctgc	420
cacctcttga	attatacaat	tctcatgcgg	cccagggttcg	gcattttgct	cacagtcac	480
tcattggttc	tcagtaatat	tattgctctg	acacacaccc	ttctgctcat	ccaattgtct	540
ttctgtaacc	acaacactct	cccacacttc	ttctgtgact	tgccccctct	gtcacaactc	600
tcctgttcag	atacattgat	caatgagctt	gtgttggttt	ttgtgggttt	atcagttatc	660
atcttccctt	ttacactcag	cttcttttcc	tatgtctgca	tcacagagc	tgctcctgaga	720
gtatcttcca	cacagggaaa	gtggaaagcc	ttctccactt	gtggctctca	cctgacagtt	780
gtattactgt	tctacggaac	cattgtaggc	gtgtactttt	tccccctctc	cactcaccct	840
gaggacactg	ataagatttg	tgctgtccta	ttcactgtgg	tgacacccat	gataaacccc	900
ttcatctaca	gcttgaggaa	taaggatatg	aaaggtgcc	tgagaaagct	catcaataga	960
aaaatttctt	ccctt					975

<210> 500

<211> 768

<212> DNA

<213> Unknown (H38g349 nucleotide)

<220>

<223> Synthetic construct

<400> 500

atgtactttt	tcctcagtc	tctatccttt	ttggatactt	gttattccaa	tgtatttaca	60
cccaaactgt	tagagatttt	ggttgtggaa	gacagaacta	tctccttcaa	aggatgcatg	120
gtacaatttt	tctttgggtg	tgcatttgta	atcacagaaa	tgttcatgtt	agcgggtgatg	180
gcttatgact	tgtttatggc	tgtttgtaac	ccctgtctct	acacagtggc	tatgtctcct	240
aagctctgtg	ctctcctggg	agctggaact	tacacatggg	gtggactctg	ttccctgaca	300

ctcacttatt	ctcttttggg	gttatccctac	tgtggatcta	acatcataaa	tcacttttggc	360
tgtgagtact	ctgccattct	ttctctatcc	tgtcttgatc	cctacttcaa	ccagatggcg	420
tgttttagtca	tttctatatt	cagtgaagct	tgtagcctcc	tggccatcct	tgccttctat	480
gtcttcatag	ttgccactgt	catcaagatg	ctttctacgg	gtggacccca	aaaggccatc	540
tccacctgtg	cctcccacct	gaccaccgtc	tccattttcc	atgggggtcat	cctgtctcctt	600
tactgtgtgc	ccaactccaa	aagctcatgg	ctcctgggtca	aagtggctac	tgtacttttt	660
acagtcataa	tccctatgct	gaatcccctg	atctacagcc	ttaggaacaa	agatgtaaaa	720
gggaccgtca	ggaagttgat	aaactcccaa	tcaccttttc	actcaaaa		768

<210> 501

<211> 951

<212> DNA

<213> Unknown (H38g350 nucleotide)

<220>

<223> Synthetic construct

<400> 501

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gagctgcaga	taggtctctt	ctttgtgttt	ctgggtcattt	ttctcatcac	catggggggc	120
aacctgggca	tgattgtgct	aatttaattc	agactgaccc	tgggtccag	actcccatgt	180
acttcttctt	cagtcattct	tccttcctgg	acattttgcta	ctcttctgtt	attggtcctc	240
agttgcttga	gactttggga	ctgataagat	gatcatcacc	tatgagcgct	gtgccagcca	300
attcttcttt	ttcacactct	gtgctagcat	tgagtgtttc	cttttggctg	tgatggctta	360
tgaccggtac	gtggctgtgt	gtaacccccct	cctctatgcc	atagtcatga	caccaaagac	420
ccgcctggcg	ctgctggccg	gggcataattc	tggtgccata	gtcaattctg	tgatctgcac	480
tggctgcacc	ttctctatct	ccttctctaa	gtccaaccat	gtagacttct	ttttctgtga	540
cctcccaccc	ctgctgaagc	ttgcctgtag	tgaaccagg	ccacgggaat	gggtaatcta	600
cctctcagct	tttctgggtca	tcacaaccag	catttcagtg	attcttacat	cgtacttggt	660
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tgtgcttctc	acatgactgc	attgactctc	ttctttggaa	cactcatatt	catataacctg	780
aaaggcaaca	tgggcgaatc	ccttgaggaa	gacaagatcg	tgtcaatatt	ttacactgtg	840
gtcatcccca	tgctaaatcc	aatgatctac	agcctgagaa	acaaagacat	gaaagaggct	900
ctgaagaaag	ttttcaacag	gataaggggt	tccaagcag	agtaactctt	g	951

<210> 502

<211> 939

<212> DNA

<213> Unknown (H38g351 nucleotide)

<220>

<223> Synthetic construct

<400> 502

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taccagaac	tgcaagtccc	actcttctctg	gtttttctgg	ccatctacaa	tgctactgtg	120
ctaggggaata	ttgggttgat	tgtgatcatc	aaaatcaacc	ccaaactgca	tacccccatg	180
tactttttcc	tcagccaact	ctcctttgtg	gatttctgct	attcctccat	cattgctccc	240
aagatgttgg	tgaaccttgt	tgtcaaagac	agaaccattt	catttttagg	atgcgtagta	300
caattctttt	tcttctgtac	ctttgtggtc	actgaatcct	ttttattagc	tgtgatggcc	360
tatgaccgct	tcgtggccat	ttgcaaccct	ctgctctaca	cagttgacat	gtcccagaaa	420
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acgtgctctg	ctttaaagtt	atgttttcat	ggtttcaaca	caatcaatca	cttcttctgt	540
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ttctttcttg	ccacctttaa	tgaatcagc	acactactca	tcgttctcac	atcttatgcy	660
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acctgtgcct	cccacctgac	tgccatcacc	atcttccatg	gcaccatcct	cttcttttac	780
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gtgggtgatcc	ccatgttgaa	tcccctgac	tacagtcctga	gaaataaaga	tgtcaaggat	900
acagtcaccg	agatactgga	caccaaagtc	ttctcttac			939

<210> 503
 <211> 932
 <212> DNA
 <213> Unknown (H38g352 nucleotide)

<220>
 <223> Synthetic construct

<400> 503
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 ctccagtggg ggggttcctct cttectcata tttttgagtt tctatcttgc cactatgtta 120
 gggaacacag gcatgacct cctgatccgt ggcatcgct ggctccacac cccgatgtac 180
 ttcttcctca gccaccttct cttgggtggac atctgctact cgtccgccat catccctcag 240
 atgctggctg tgctgtggga gcacggcaca accatctccc aggctcgctg tgcagctcag 300
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 ctgggcctag tcactggggc ttacgttgct ggttttttca gtgcctttgt tcgacgggtca 480
 cagccttcac tctctccttt tgtggaaaca atgagatcaa cttcattttc tgtgacctcc 540
 ctctctatt aaaactctcc tgtggggaca gctacactca ggaagtgggtg attattgtgt 600
 ttgctctttt cgtcatgcct gcctgtatct tgggtgatctt ggtatcctac ctgtttatca 660
 ttgtggccat cctgcagatc cactctgctg gaggccgggc caagaccttc tccacctgcg 720
 cctccacact cactgccgct gctcttttct ttggcaccct catcttcatg tacctgcgag 780
 acaacacagg ccagtcctcc gagggagacc gagtgggtgc tgtgctctac acggtgggtga 840
 ccccaatgct gaatccctt atctatagcc tgagaaacaa ggaggtaaaa gagggcacta 900
 ggaaagccct gagcaaatca aagcctgcta ga 932

<210> 504
 <211> 762
 <212> DNA
 <213> Unknown (H38g353 nucleotide)

<220>
 <223> Synthetic construct

<400> 504
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 gtcaccatgc tgagtatatt ctggttcaat gtgagggaaa tcagctttaa tgccctgttg 120
 tcccacatgt tctttattaa attcttcact gtcattggaat cctcagtgt gttggccatg 180
 gcttttgatc gttttgtggc cgtctctaatt ccccttaggt atgccatgat ttaactgac 240
 tccagaatag ctcaaattgg agtggcaagt gtcatcaggg ggctcctaatt gctgacacca 300
 atggtagcac ttcttataag actttcctac tgccacagcc aagtactcca ccactcctac 360
 tgctaccacc ctgatgtgat gaagctctca tgcacagaca ccagaatcaa cagtgcagtt 420
 gggctgactg ccatgttctc tactgttgggt gtagacttac ttctcatcct cctttcttat 480
 gttttgatca ttaggactgt ccttagcgtt gcttccccag aagagaggaa ggaaaccttc 540
 agtacatgtg tctccacat tgtggctttt gctatatatt acattccatt gatcagtcg 600
 tccattgttc acagatttgg gaaacaagcc ccagcctatg tacatactat gattgctaac 660
 acctacctgc tgatctcccc tttgatgaac cctgtcatct acagtgtgaa aaccaaacag 720
 atacgtagag ctgtgataaa aattctccat tccaaagaaa ca 762

<210> 505
 <211> 565
 <212> DNA
 <213> Unknown (H38g354 nucleotide)

<220>
 <223> Synthetic construct

<400> 505
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 ccagagatga aagtgacctt atttgctgta ttcttggctg tttatatcat taattttctca 120
 gcaaactctt gaatgatagt tttaatcaga atggattacc aacttcacac accaatgtat 180

ttcttctca	gtcatctgtc	tttctgtgat	ctctgtctatt	ctactgcaac	tgggccccag	240
atgctggtag	atctacttgc	caagaacaag	tcaataccct	tctatggctg	tgctctgcaa	300
ttcttggctt	tctgtatctt	tgcagattct	gagtgtctac	tgctgtcagt	gatggccttt	360
gatcggtaca	aggccatcat	caacccccctg	ctctatacag	tcaacatgtc	tagcagagt	420
tgtatctac	tcttgactgg	ggtttatctg	gtgggaatag	cagatgcttt	gatacatatg	480
acactggcct	tccgcctatg	cttctgtggg	tctaatagaga	ttaatcattt	cttctgtgat	540
atccccctct	ctcttattac	tctct				565

<210> 506

<211> 978

<212> DNA

<213> Unknown (H38g355 nucleotide)

<220>

<223> Synthetic construct

<400> 506

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ctcagcactg	tgacagagtt	cattcttcta	gtcttcacag	atcacccctga	actggcagtt	120
ccactcttcc	tagtgtttct	cagtttctat	cttgctcactt	ttctggggaa	tgggggggatg	180
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gccacagaca	agacagttat	ctcctatggc	tgccgtgctg	tgcaattctc	tttcttcacc	360
atatgtgcag	gcacagagtg	ttacctgctg	tcagtgatgg	cctatgaccg	ctttgttgcc	420
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aagctcgcct	gcagcagcat	gacacaaact	gagattgtca	ttctcctttg	tgcaaaatgc	660
atgttcctag	ccaatgtcat	ggttatcctg	atctgtctaca	tgctcattat	cagagccatt	720
ttgaggggga	agtcggcagg	tgggtaagcc	aagaccttct	ccacctgcac	ctcccatctc	780
accactgttg	tcctcttctt	tgggacactt	gccttcattg	accagagaag	taactccgcc	840
aaatcctcag	aggaagacaa	gatagtgtct	gtcttttaca	ctgtaatcat	ccctatgttg	900
aacccttga	tctacagtct	gaggaacaaa	gatgtaaaag	ctgcatttgg	aaaactcggt	960
ggtaaatcc	aatttcca					978

<210> 507

<211> 983

<212> DNA

<213> Unknown (H38g356 nucleotide)

<220>

<223> Synthetic construct

<400> 507

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attggcatcc	cagggctgga	ggcggttcat	ggctggctcg	ccatccccctt	ctcctccatg	120
tacactgtgg	ccctccctgg	gaactgcctg	atcctcctgg	ctgtgaagag	gaaccccgagc	180
ctgcaccagc	ccatgtgcta	cttctctgtc	atgtgggcgc	tcccaaaagc	gggcctcacc	240
ttgtccacac	tgcccatcac	cttggctgtg	ctctggtttg	accaccggct	catgggcttc	300
aatgcctgcc	tggtcagat	gttcttctct	cactcctctg	tgggtggagt	ctcagtgtc	360
ctggccatat	cctttgacca	ccttggggcc	atctccaacc	ccctgcacta	tgcagtgtc	420
ctcacaaata	gtgtcatcat	caggattggg	ctggccattg	tggctcaagt	tacctgtgc	480
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cccactcggt	ctgtttccac	cctgatgtaa	tgaggcgggc	ctgtgcggac	atcacgatca	600
atatatgcta	tggggctctac	gtgggtgttt	ctacaggggg	cttagactcg	ctgctcatct	660
ttctgtccta	taccttcac	ctgcacacag	tcattgggtct	ggctgctccc	agggagcgca	720
tctgggccc	caacacctgc	gtttcccaca	ttccggctgt	ctttgtcttc	tttattccag	780
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ttgttaccta	tgtgtacctg	gtgatgcctt	ctgtgtccca	ccccatcatt	tacagtatga	900
agtccaagcc	catcagggag	gccatcctca	ggatgctgat	ggggagaagc	caaggctgat	960
gaaattacaa	aatattatag	ggt				983

<210> 508
 <211> 933
 <212> DNA
 <213> Unknown (H38g357 nucleotide)

<220>
 <223> Synthetic construct

<400> 508
 atgggcaagg aaaactgcac cactgtggct gagttcattc tccttggact atcagatgtc 60
 cctgagttga gagtctgcct cttcctgctg ttccttctca tctatggagt cacgttggtta 120
 gccaacctgg gcatgattgc actgattcag gtcagctctc ggctccacac ccccatgtac 180
 tttttcctca gccacttgct ctctgtagat ttctgctact cctcaataat tgtgccaaaa 240
 atgttggcta atatctttaa caaggacaaa gccatctcct tcctaggggtg catggtgcaa 300
 ttctacttgt tttgcacttg tgtggtcact gaggtcttcc tgctggccgt gatggcctat 360
 gaccgctttg tggccatctg taaccctttg ctatacacag tcaccatgtc ttggaagggtg 420
 cgtgtggagc tggcttcttg ctgctacttc tgtgggacgg tgtgttctct gattcatttg 480
 tcttagctc ttaggatccc cttctataga tctaattgtga ttaaccactt tttctgtgat 540
 ctacctctg tcttaagtct tgcttgcctt gatatactg tgaatgagac actgctgttc 600
 ctgggtggcca ctttgaatga gagtgttacc atcatgatca tcctcacctc ctacctgcta 660
 attctcacca ccacctgaa gatgggctct gcagagggca ggcacaaagc cttctccacc 720
 tgtgcttccc acctcacagc tatcactgtc ttccatggaa cagtcctttc catttattgc 780
 agggccagtt caggcaatag tggagatgct gacaaagtgg ccaccgtgtt ctacacagtc 840
 gtgattccta tgcctgaactc tgtgatctac agcctgagaa ataaagatgt gaaagaagct 900
 ctcagaaaag tgatgggctc caaaattcac tcc 933

<210> 509
 <211> 621
 <212> DNA
 <213> Unknown (H38g358 nucleotide)

<220>
 <223> Synthetic construct

<400> 509
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 cgctttttt ttttttctca gtgttttaga cgcccagctg cacaacttga ttgccttaca 120
 aatgacctgc ttcaggatg cggaattcc taatttctc tgtgacctt ctcaactccc 180
 ccactttgca tgttgtaga cttcaccaa taacataatc atgtatttcc ctgctgtcat 240
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 tctgagtgtt tcatcatcac gtgggcagta taaggccttc tccacctgtg ggtctcacct 360
 gtcagttgtt tgcctgattt acggaacggg cgttgaggga tacttcagtt cagatgtgtc 420
 atcttcccc agaaaggctg cagtggcctc agtgatgtac acggtgatca ccccatgctg 480
 aacccttca tctacagcct gagaaacagg catattaaaa gtgtcctgcg gcggccgcac 540
 agcagcaccg tccaatctcc gtgtcttctt aactgttcca ttccttttgt agtgtgggtt 600
 aacaaaggca gcaaggctca a 621

<210> 510
 <211> 633
 <212> DNA
 <213> Unknown (H38g359 nucleotide)

<220>
 <223> Synthetic construct

<400> 510
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 gattattttg tgggactgtc aacccttgct ttatgacacc atcacaaactc tcaagatgtc 120
 tggcagaagc tgggtgactgc atattgtaga gggtttgaca aatgtaatcc aatgtatata 180
 cttcacctgc tcactctcct tttgtgcctt catctatagg tttcactctc tgtgacctcc 240

attgctgctg	accctgaatt	gggtgatagc	ttcctccagc	agctgctgat	ttttcacttt	300
gctctgtata	tgattctgac	cagactagtt	ttgatcctgt	tctctgactt	gttcacacgc	360
aaggccatct	aaacacctgc	aaatcaggtc	tctaggcaaa	gattcctcaa	cctttttcta	420
cctttgcctc	atgcagaact	gcagttcggg	tgattgttga	gactacagct	ttgatctatg	480
tgtgcagcag	taggcaagtc	ccttacaggg	gagagggccg	tgaccatgtt	ttagactgta	540
gtgaacacca	ggctgaccat	tccaatttta	tagcctgagg	aaaaaaaggc	aaaggaggcc	600
ctgaggaaag	gtcttaataa	agccaagttg	ttc			633

<210> 511

<211> 945

<212> DNA

<213> Unknown (H38g360 nucleotide)

<220>

<223> Synthetic construct

<400> 511

atgagttcct	gcaacttcac	acatgccacc	tttgtgctta	ttggtatccc	aggattagag	60
aaagcccatt	tctgggttgg	cttccccctc	ctttccatgt	atgtagtggc	aatgtttgga	120
aactgcatcg	tggtcttcat	cgtaaggacg	gaacgcagcc	tgcaagctcc	gatgtacctc	180
tttctctgca	tgcttgacgc	cattgacctg	gccttatcca	catccaccat	gcctaagatc	240
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ttctttatc	atgccctctc	agccattgaa	tccaccatcc	tgctggccat	ggcctttgac	360
cgttatgtgg	ccatctgcca	cccactgcgc	catgctgcag	tgctcaacaa	tacagtaaca	420
gcccagattg	gcatcgtggc	tgtgggtccgc	ggatccctct	tttttttccc	actgcctctg	480
ctgatcaagc	ggctggcctt	ctgccactcc	aatgtcctct	cgcactccta	ttgtgtccac	540
caggatgtaa	tgaagtggc	ctatgcagac	actttgcccc	atgtggtata	tggtcttact	600
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gtgtcacaca	ttggtgtggt	actgcctctc	tatgtgccac	ttattggcct	ctcagtggta	780
caccgctttg	gaaacagcct	tcattccatt	gtgcgtgttg	tcattgggtga	catctacctg	840
ctgctgcctc	ctgtcatcaa	tcccatcctc	tatggtgcca	aaaccaaaca	gatcagaaca	900
cgggtgctgg	ctatgttcaa	gatcagctgt	gacaaggact	tgcag		945

<210> 512

<211> 834

<212> DNA

<213> Unknown (H38g361 nucleotide)

<220>

<223> Synthetic construct

<400> 512

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cgactgcacg	agcccatgta	cctcttccctg	gccatgcttt	ccactattga	cctagtccctc	120
tcctctatca	ccatgcccaa	gatggccagt	cttttccctga	tgggcatcca	ggagatcgag	180
ttcaacattt	gcctggccca	gatgttccct	atccatgctc	tgtagccctg	ggagtcagct	240
gtcctgctgg	ccatggcttt	tgaccgcttt	gtggccattt	gccacccatt	gcgccatgct	300
tctgtgctga	cagggtgtac	tgtggccaag	attggactat	ctgccctgac	caggggggtt	360
gtattcttct	tcccactgcc	cttcacctc	aagtgggtgt	cctactgcca	aacacatact	420
gtcacacact	ccttctgtct	gcaccaagat	attatgaagc	tgctctgtac	tgacaccagg	480
gtcaatgtgg	tttatggact	cttcacatc	ctctcagtca	tggtgtgtga	ctctctcttc	540
attggcttct	catatatact	catcctgtgg	gctgttttgg	agctgtcctc	tcggagggca	600
gcactcaagg	ctttcaacac	ctgcactctc	cacctctgtg	ctgttctggg	cttctatgta	660
cccctcattg	ggctctcggg	ggtgcatagg	ctgggtgggc	ccacctccct	cctccatgtg	720
gttatggcta	atacctactt	gctgctacca	cctgtagtca	accccttctg	ctatggagcc	780
aagaccaaa	agatctgttc	aagggtcctc	tgtatgttct	cacaagggtg	caag	834

<210> 513

<211> 957

<212> DNA

<213> Unknown (H38g362 nucleotide)

<220>

<223> Synthetic construct

<400> 513

atgctggggtc	cagctttacaa	ccacacaatg	gaaacccctg	cctccttctc	ccttgtgggt	60
atcccaggac	tgcaatcttc	acatcttttg	ctggctatct	cactgagtgc	catgtacatc	120
acagccctgt	taggaaacac	cctcatcgtg	actgcaatct	ggatggattc	cactcggcat	180
gagcccatgt	attgctttct	gtgtgtttct	gctgctgtgg	acattgttat	ggcctcctcc	240
gtgggtaccca	agatggtgag	catcttctgc	tcgggagaca	gctccatcag	ctttagtgtc	300
tgtttctactc	agatgttttt	tgtccactta	gccacagctg	tggagacggg	gctgctgtcg	360
accatggctt	ttgaccgcta	tgtagccatc	tgcaagcctc	tacactacaa	gagaattctc	420
acgcctcaag	tgatgctggg	aatgagtatg	gccgtcacca	tcagagctgt	cacattcatg	480
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tcctactgta	agcacatagc	tttggccagg	ttagcatgtg	ctgaccccg	gccagcagt	600
ctctacagtc	tgattgggtc	ctctcttatg	gtgggctctg	atgtggcctt	cattgctgcc	660
tcctatatct	taattctcag	ggcagtattt	gatctctcct	caaagactgc	tcagtgtaaa	720
gcattaagca	catgtggctc	ccatgtgggg	gttatggctt	tgtactatct	acctgggatg	780
gcattccatct	atgcggcctg	gttggggcag	gatatagtgc	ccttgccacac	ccaagtgtcg	840
ctagctgacc	tgtacgtgat	catcccagcc	actttaaatc	ccatcatcta	tggcatgagg	900
accaaacaat	tgctggaggg	aatatggagt	tatctgatgc	acttctctct	tgaccac	957

<210> 514

<211> 966

<212> DNA

<213> Unknown (H38g363 nucleotide)

<220>

<223> Synthetic construct

<400> 514

atgaatgaga	caaatacttc	ttgggtgaca	gaatttgtgt	tgctgggact	gtctagttca	60
agggagctcc	aacctttctt	gtttcttata	ttttcactac	tttatctagc	aattctgttg	120
ggcaactttc	tcatactcct	cactgtgacc	tcagattccc	gccttcacac	ccccatgtac	180
tttctgcttg	caaacctgtc	atztatagac	gtatgtgttg	cctcttctgc	taccctaaa	240
atgattgcag	actttctggt	tgagcacaag	actatttctt	ttgatgccca	cctggcccag	300
attttctttg	ttcatctctt	cactggcagt	gaaatgggtc	tcctagtttc	catggcctat	360
gaccgttatg	ttgctatatg	caaacctccc	cactacatga	caatcatgag	ctgctgtgta	420
tggtttgtgc	tcgtcctcat	ttcctgggtt	gtgggcttca	tccataccac	cagccagtgc	480
gcattcacgt	taatctgcca	ttttgtggtc	ctaataagg	agatagtttt	tttctgtgac	540
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gcagatagtg	gctttctttc	tctgagttcc	tttctcctct	tggttgtctc	ctacactgta	660
atacttgta	cagttaggaa	tcgctcctct	gtaagcatgg	tgaaggccca	ctccacattg	720
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attttaaacc	ctgtaactca	catgctaaga	aacaaagaag	tgaaggcagc	tatgtcaaaa	900
ctgaagagtc	ggatatcagaa	gcttggtcag	gtttctgtag	tcataagaaa	cgttcttttc	960
ctagaa						966

<210> 515

<211> 966

<212> DNA

<213> Unknown (H38g364 nucleotide)

<220>

<223> Synthetic construct

<400> 515

atgctggggtc	cagctttataa	ccacacaatg	gaaacccctg	cctccttctc	ccttgtgggt	60
atcccaggac	tgcaatcttc	acatcttttg	ctggctatct	cactgagtgc	catgtacatc	120

atagccctgt	taggaaacac	catcatcgtg	actgcaatct	ggatggattc	cactcggcat	180
gagcccatgt	attgctttct	gtgtgttctg	gctgctgtgg	acattgttat	ggcctcctcg	240
gtggtaccca	agatggtgag	catcttctgc	tcaggagaca	gctcaatcag	ctttagtgtc	300
tgtttcactc	agatgttttt	tgtccactta	gccacagctg	tggagacggg	gctgtgtgtg	360
accatggctt	ttgaccgcta	tgtagccatc	tgcaagcctc	tacactacaa	gagaattctc	420
acgcctcaag	tgatgctggg	aatgagtatg	gccatcacca	tcagagctat	catagccata	480
actccactga	gttggatggg	gagtcaccta	cctttctgtg	gctccaatgt	ggttgtccac	540
tcctactgtg	agcacatagc	tttggccagg	ttagcatgtg	ctgaccccg	gcccagcagt	600
ctctacagtc	tgattgggtc	ctctcttatg	gtgggctctg	atgtggcctt	cattgctgcc	660
tcctatatct	taattctcaa	ggcagtattt	ggtctctcct	caaagactgc	tcagttgaaa	720
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gcatccatct	atgcggcctg	gttggggcag	gatgtagtgc	ccttgacac	ccaagtccctg	840
ctagctgacc	tgtacgtgat	catcccagcc	accttaaatc	ccatcatcta	tggcatgagg	900
accaaacac	tgcgggagag	aatatggagt	tatctgatgc	atgtcctctt	tgaccattcc	960
aacctg						966

<210> 516

<211> 942

<212> DNA

<213> Unknown (H38g365 nucleotide)

<220>

<223> Synthetic construct

<400> 516

atggaggggg	tcaactattc	cagagtatct	gaattcatgt	tacttggact	tactgattct	60
cctgaactcc	agatattctt	ttctgtgggt	ttttctgtct	tctatttaat	gaccatgttg	120
ggcaactgcc	tgattttgct	cactgtccta	tcacctcac	accttctctc	tcgcatgtac	180
ttcctgctca	gcaacatgtc	tcattgacat	gtgcctgtcc	tcctttgcc	caccaaagat	240
gattatggac	ttttttgctc	tgcgtaagac	catctctttt	gaaggctgca	tttctcagat	300
ctttttttta	cacctcttca	atgggactga	gattgtgctg	ttgatctcca	tgtcttttga	360
caggtatatt	gccatatgta	aacctctcca	ctattcaaca	attatgagcc	aaagagtgtg	420
tgttgagctt	gtggcagttt	cttgttggac	agtgggcttt	ctacatacaa	tgagccaatt	480
agtttttccc	tctatttgcc	cttctgtgtt	cccaatgttg	tagacagttt	tttctgtgat	540
cttcctttgg	tcattccagt	agcttgtata	gatatttatg	ttcttgggac	ctccatgatt	600
tcaaccagt	gtgtgattgc	tcttataagt	tttctgcttt	tgtcacctc	ctacatcatt	660
gttcttaata	ttgtcaggga	ctactcctcc	acaggatcct	ccaaggctct	ttctacctgt	720
acagcgcat	ttattgttgt	gttaatgttc	tttggccct	gtattttcat	ttatgtgtgtg	780
ccttccacaa	acttctctgg	agacaaaatt	ctctccgttt	tctataccat	cttcactccc	840
tttctgaatc	cacttatcta	tactttgaga	aaccaggaag	tgaagacagc	aatgaagaag	900
aaactgaata	ttcagtattt	cagtcttggg	aaaactgctc	cg		942

<210> 517

<211> 952

<212> DNA

<213> Unknown (H38g366 nucleotide)

<220>

<223> Synthetic construct

<400> 517

atgctcactt	ttcataatgt	ctgctcagta	cccagctcct	tctggctcac	tggcatccca	60
gggctggagt	ccctacacgt	ctggctctcc	atcccccttg	gctccatgta	cctgggtggct	120
gtggtgggga	atgtgaccat	cctggctgtg	gtaaagatag	aacgcagcct	gcaccagccc	180
atgtactttt	tcttgtgcat	gttggctgcc	attgacctgg	ttctgtctac	ttccactata	240
cccaaacttc	tgggaatctt	ctgggtcggg	gcttgtgaca	ttggcctgga	cgctgcttg	300
ggccaaatgt	tccttatcca	ctgctttgcc	actgttgagt	caggcatcct	ccttgccatg	360
gcttttgatc	gctacgtggc	ccatctgcaa	cccactacgt	catagcatgg	tgtcacttta	420
tacagtgggt	ggctggtttg	ggcttgtttc	tctcctccgg	ggtgttctct	acattggacc	480
tctgcctctg	atgatccgcc	tgcggtgcc	cctttataaa	acccatggtta	tctcccactc	540
ctactgtgag	cacatggctg	tagttgcctt	gacatgtggc	gacagcaggg	tcaataatgt	600

ctatgggctg agcatcggtt ttctgggtgtt gatcctggac tcagtggcta ttgctgcac	660
ctatgtgatg attttcaggg ccgtgatggg gtttagccact cctgaggcta ggcttaaaac	720
cctggggaca tgcgcttctc acctctgtgc catcctgac ttttatgttc ccattgctgt	780
ttcttccctg attcaccgat ttggtcagtg tgtgcctcct ccagtccaca ctctgctggc	840
caacttctat ctctcattc ctccaatcct caatcccat gtctatgctg ttcgaccaa	900
gcagatccga gagagccttc tccaaatacc aaggatagaa atgaagatta ga	952

<210> 518

<211> 301

<212> DNA

<213> Unknown (H38g367 nucleotide)

<220>

<223> Synthetic construct

<400> 518

cagatgctga cagattgggtg gggacctaata aggaccacaa gttacgtgaa ctcaccattc	60
aattccttgt ctctctgtag ttatgtgcca ctatataatt tctacaatta ttttataatt	120
atatgccatc ctttctaata tttgttaata atgaacctat atctcctcct taatcttact	180
ttaataacttg agggataatt cattcatttt tggcatcatg tatactctca tcctaaaaat	240
tcgaaggatg aaaaaaaaaa accttcagat aattccctc attggttgct gccttgctga	300
a	301

<210> 519

<211> 506

<212> DNA

<213> Unknown (H38g368 nucleotide)

<220>

<223> Synthetic construct

<400> 519

aatagtgagt ccaagcattt cttactctta aaattgtgtt caatgtttgc agtcactttc	60
ctatccctga tattatcagg aaagggcctg caatttcctt tctacttctc tgagtcaact	120
gcaaagtctc agatgttttc acagttgaga caagagaaca agaagcacca atgaaaacca	180
cgggggttcta tggaggcatc atgggtgtgtt gagtagaagc atgctactct agctgtatct	240
cactgggttc aaatcctgac tatacggcat atgggtgcatt aacagcccgc tgaccacaag	300
aatttctatg ctggtaaaat aggtttataa taatgccagt caatctaaag atgctttaag	360
tgaagactat ttgggtgttt tcaaggactc aataatcatt aactgtgac acgatctttc	420
ccttacctac tttcaataag taaataattt acatttatta aacaaaagaa atttaattct	480
gcttttctga aacaacacaa ttctat	506

<210> 520

<211> 837

<212> DNA

<213> Unknown (H38g369 nucleotide)

<220>

<223> Synthetic construct

<400> 520

ctccctcccc tgtttttttag agtttttgta attttggttt gtttcactac tctttgttaa	60
gctatgcatt ctctttctaa ttattctact tgtaaattt ttattaaaaa caaaaatagc	120
aatgacatat ttacatatt tatctaatta taagctcaaa gcatgaaata gtattgactt	180
ccacatacat atgtttgtgt acgtgtatat tatgaataaa ttagttcatc tcaaatatga	240
aactttaaca tctttaccat ttttttgga tagtctagga ttttagacac ttcttaattt	300
tgttttacct ttatgtcac atattcttca ttaatagtta ttaatatgtt gtattttcta	360
gctgttcttg caaaaagtag ttttatttta tgtttcaaca gtctcagcgt caactgtgac	420
actttctgtg tttggctttc ttgttttgga attgtttatc ttgatgtgca tccatttgca	480
cattgttatg ttctcaaaa gattatttaa atgttatgtg tttttatgat cactcgtttt	540
ttgcttcatg catgcattat tgccttaaac attaaaaaat acttgttttg atgtgctttt	600

tatctttata tgtgaaaaat ctttgctggc taatatgtct tttgtcacia ttgtttcttc	660
cttaattctc ttaacgaatt aagagattat ttcattttct tctgtcattt tatgtggtac	720
aatacatctg aatctgtcct catttttctt acataggttt ttcattttct ttttctgctt	780
gaaattgcca acatatatct aaatgttgac ctacttagta ttatactgac tttggta	837

<210> 521

<211> 461

<212> DNA

<213> Unknown (H38g370 nucleotide)

<220>

<223> Synthetic construct

<400> 521

tgcaccatgt gtgtttggct cttagcttga gacaggcaaa tccacataca ctcacattcc	60
aacaagccaa agcaagtcac ccacccatt gcttctggga caaggatgta cattcctcct	120
gggcgtgggg gtgcgggtac cgcaaggggga ataaattttt cctgagctac gatacactct	180
cccacaaaa gtcatacacc catttagata acaacttttc ttgagtagtt cagatatcat	240
caatgatcca catattgata aacatgactc gacactaata acactgtgag cattttacac	300
tattttctat aaactccact atgtccatt tattctcaga aattctctct atgatatact	360
tcatgggcac aaagaagaat gagtgaaagc cagcaaaaa ggactgtgaa agccactaaa	420
aagggtgga ataaatggga caaatcatca tactcttcta t	461

<210> 522

<211> 554

<212> DNA

<213> Unknown (H38g371 nucleotide)

<220>

<223> Synthetic construct

<400> 522

cctgctcacc ccggttcccc ccaccaccct ctctttcccc cttacatcta cccaaaaact	60
ttttccccac catctttccg caaaaccttc tctcctcctt gttcaccacc gtttttcccc	120
ctccacctac ccccaacatt ttttccccac cgtcttttcc tcaactgtctt ttttgcaaca	180
ccttctctcg ctgcacatcc tcttttccct ttggcactaa ccaccctctt tactcctcca	240
tctaccccaa aactattttc cccttcctac cgtccagcc acactgcagt ctccgtcgt	300
gccaccaacc gcagcgagge gagctgtggt gccgcagcca cagcctccag catgcagcgg	360
tggctagccc ttgtcctggt cctctaagcc gggaacggag cagccccgcg cgcagacacg	420
catgagccta gaacggcctg acacccttc agcaccattt atatactgag gttatgcata	480
tgaggttccct ggactacatg ttccaggatt gggtaaagaga aaacgcagag gcctactctg	540
attggacttt gttta	554

<210> 523

<211> 424

<212> DNA

<213> Unknown (H38g372 nucleotide)

<220>

<223> Synthetic construct

<400> 523

tatatagaaa tggacaacta ttttctaaca taactataac gatattttact atttttccat	60
tttataatct ctactcaata ttttggtatt aaaaaattca tcttaacttc tttgttggct	120
tattgttttt gatgttcagc attactaaat ttttgactta tggtttgaaa tggctgctca	180
ttcctgattg ctgatcctgg tatcaacatg cctgatttaa cccttaacaa attctattct	240
tacaaaatag ctgaagttgg ttggagggtt atttttacca tttcttttat ttgctgtccc	300
ttttgataaa attattttcc ttagttaaaa aatgtattta aataagtaaa taatatctgt	360
gctagttggt actcgggtgga catttcagag gtgtgtccat actttatgta ttttatcact	420
gttt	424

<210> 524
 <211> 246
 <212> DNA
 <213> Unknown (H38g373 nucleotide)

<220>
 <223> Synthetic construct

<400> 524
 aatgtattta ggtaatttct tgacttctgc agggactctg atatacacag agcgtacctg 60
 tgtatactgt ccagtttagct cagattctca gttttgggca ttttctaagg gagggcaatg 120
 aacatcctga taggtttaac taaggtttta aaatgtccaa ttttatgtgt ggtttttaac 180
 cacacctgca tcctaattac gaccttggct gttatagctt ataggtttag gcaatctgga 240
 tatagt 246

<210> 525
 <211> 619
 <212> DNA
 <213> Unknown (H38g374 nucleotide)

<220>
 <223> Synthetic construct

<400> 525
 gaaattatat tgattgggat ttctctcaaa ctaatctagt tgtattcacc attattaaaa 60
 ttaagtgaca ctcaattgga ctaagtagca ataaaaatat gagacttcct agtgattttt 120
 ttttatccca agccatttac tactgatggg ccttgatgtg tgtgcttgaa aacaaaacat 180
 atgcaagtgt tagactgggt tgaagatttg ggtggtgaaa gtttagcta atagctgcaa 240
 tgctctatct agaagccaat cttggaaaata tggtagaatg cccttttaaa atagctgaaa 300
 agaaattatt ttgtgtttgt tttcacttca ttcttgtttg gttgtatagc atttaagtga 360
 aaggagattt tttatcctta tactagtatt tgcatttacc atctttta atgatggagaga 420
 aaagttagtt gtcttacttt gatatgtttg gcataggacc tatgacactt ttgatgtttt 480
 tggtcacagt tctgtcacta gaatgctagc aattagatat atgcaatgag taacctactt 540
 taatacaatg gtttgaagta ccacaggcag taactcctaa acaccaaata acagtgtttt 600
 aatttgtaac atgttaaag 619

<210> 526
 <211> 939
 <212> DNA
 <213> Unknown (H38g375 nucleotide)

<220>
 <223> Synthetic construct

<400> 526
 atgagaaatt tgagtggagg ccatgtcgag gagtttgtct tgggtggggtt ccctaccacg 60
 cctccccctc agctgtcctt ctttgtcctt ttttttgcaa tttaccttct gacattgttg 120
 gagaatgcac ttattgtctt cacaatatgg cttgtctcaa gccttcacg tcccatgtac 180
 tttttccttg gccatctctc tttcctggag ctatggtaca tcaatgtcac cattcctcgg 240
 ctcttggcag cttttcttac ccaggatggg agagtctcct acgtagggtg catgacccaa 300
 ctgtacttct ttattgcctt agcctgtact gaatgtgtgc tgttggcagt tatggcctat 360
 gatcgctacc tggccatctg tggaccctc ctttacccta gtctcatgcc ttccagtctg 420
 gccactcgcc ttgtgtctgc ctcttggggc agtggcttct tcagctccat gatgaagctt 480
 ctttttattt cccaattgtc ctactgtgga cccaacatta tcaaccactt tttctgtgat 540
 atttccccac tactcaacct cacctgtctt gacaaggagc aagcagagct agtagacttc 600
 cttctggccc tgggtgatgat tctactccct ctattggctg tggtttcac atactatgcc 660
 atcattgcag ccacctctgag gatecctacg tccaggggac gccacaaagc cttttccact 720
 tgtgccgctc atctggcagt ggttgttatc tactactcct ccactctctt cacctatgca 780
 cggccccggg ccattgtacac cttcaaccac aacaagatta tctctgtgct ctacactatc 840
 attgtaccat tcttcaacc agccatctac tgcctgagga acaaggagggt gaaggaggcc 900
 ttcaggaaga cagtgatggg cagatgtcac tatcctagg 939

<210> 527
 <211> 965
 <212> DNA
 <213> Unknown (H38g376 nucleotide)

<220>
 <223> Synthetic construct

<400> 527
 cacacagagc cactgaatct cacagggtgc tgagaattcc tcctcctggg actctcagag 60
 gatccagaac tgcagccggt cctcgctttg ctctccctgt ccctgtccat gtatctgggc 120
 acgggtgctga ggaacctgct cagcctcctg gctgtcagct ctgactccca cctccacacc 180
 cccatgtact tcttcctctc caacctgtgc tgggctgaca tcgggttacac ctcgccacg 240
 gttcccaaga tgattgtgga cagcagctcg catggcagag tcctctctca tgctggctgc 300
 ctgacacaga tgtctttctt ggtccttttt gcctgtatag aagacatgct cctgactgtg 360
 atggcctatg actgctttgt agccatctgt tgccctctgc actaccagc catcgtgaat 420
 cctcacctct gtgtctttct cgttttggtg tctttttcc ttagcctggt ggattcccag 480
 ctgcacagtt ggattgtggt acaattcacc atcatcaaga atgtggaaat ctctaatttt 540
 gtctgtgacc cctctcaact tctcaaactt gcctgttctg acagcgtcat caatagcata 600
 ttcataatatt ttgatagtag tatgtttggt tttcttccca tttcagggat ccttttgtct 660
 tactctaaaa ttgtccctct cgttctaaag atgtcatcgt cagatgggaa gtataaagcc 720
 ttctccacct gtggctctca cctagcagtt gtttgcgtgat ttgatggaac aggcattggc 780
 atgtacctga cttcagctgt ggcaccaccc cccaggaatg gtgtcgtgga gtcagggatg 840
 tacgctgtgg tcaccccat gctgaacctt ttcacttaca gcctgagaaa caggcacaca 900
 caaagtgcc tgcgagggtc gcgcacagaa cagttgaatc tcatgatctc ttgcatcctt 960
 tttct 965

<210> 528
 <211> 557
 <212> DNA
 <213> Unknown (H38g377 nucleotide)

<220>
 <223> Synthetic construct

<400> 528
 ccagtacccc agcatctggt cttcttcctg aaagtgactg gccaccattg acctaaatca 60
 gaaacctatg atttgtccca gatttttctt tttcccttgc tcttcataatc tatcagtgat 120
 actaattcta aactaacctt aacgaactgc atctgtgccc ctctctcctc tctcctccct 180
 cactttcagt gcattgactg aggctacacc atgtgaatta ttaccatggc atgctaacag 240
 aattattgct tccaatggta ccatgccata attcatcctt catatgggtg ccaataaatt 300
 tttaaaatat ttatttgtat ctgctacttc tcagggtaaa agcttcccag catgttgaag 360
 atggaatgca aacagctctg catgcatgcc ctttgcctcat gcagctccta ttgtccatcc 420
 cccactctta cccactcttg ctggataatt cctttttatt ctttaagact catccaagaa 480
 gcaagctctc atatttccct catatacttc tgcatagacc ctttacatat gttaatcatc 540
 tgttaccttt tctcttg 557

<210> 529
 <211> 1007
 <212> DNA
 <213> Unknown (H38g378 nucleotide)

<220>
 <223> Synthetic construct

<400> 529
 tctagagacc cacagaatct aacagatgtc tctatatctc tcctcctaga agctcagagg 60
 atccagaacg gcagccggtc ctactgggc tgttctgtc cactgacctg gtcatggcgc 120
 tggggaacct gctcatcatc ctggccatca gccctgactc ccacctccac acccccatgt 180
 actttctctt ctccaacctg tcttgacctg acatcagttt cactccacc acagtcccca 240

agatgactgt	ggacatccaa	tctcacagca	gagtcatctc	ctatgcaggc	tgcctgactc	300
agatgtctct	ctttgccatt	tttggaggca	tgggaagacag	acatactcct	gagtgtgatg	360
gcctatgacc	agttttagc	caaatgtcac	cctctatata	attcagccat	catgaacccg	420
tgtttctgtg	gctttctact	tttgttgtct	tttttttttc	cctcagtctt	ttagatgcc	480
agctgtacaa	tttgattgcc	ttacaaatga	cctgcttcaa	ggatgtggaa	attcctaatt	540
tcttctgtga	cccttctcaa	ctcccccatc	ttgcatgttg	tgacaccttc	aacaataaca	600
taatcctgta	tttccctgat	gccatatttg	gttttcttcc	catctcgggg	acacttttct	660
cttacgataa	aattgtttcc	tccattctga	gggtttcatc	atcagggtggg	aagtataaag	720
ccttctccac	ctatgggtct	cacctgtcag	atgtttcctg	attttatgga	acaggcggtg	780
gagggtagct	cagttcagat	gtgtcatctt	ccccgagaaa	gactgcagtg	gcctcagtga	840
tgtacgcagt	ggtcaccccc	atgatgaacc	ccttcattcta	cagtcaggaga	aacagggata	900
tgaaaagtgt	cctgcggcgg	ccgcacggca	gcacgttcta	atctcaatac	cttcttatct	960
gttccattcc	ttttgcagtg	tgggtcgaaa	aaggctgcat	gatgaaa		1007

<210> 530

<211> 471

<212> DNA

<213> Unknown (H38g379 nucleotide)

<220>

<223> Synthetic construct

<400> 530

tttttaaaaa	tgagattaaa	ggaattaatg	taagatagaa	ccataatgga	ttattggagg	60
gaaggtaggc	acatttaggg	gatgttcttg	gcctttccgt	ttggctgacc	tatcccaaaa	120
cttttctctt	gggtctctat	cagagacatg	gcagtaacct	ggatggacca	taggcacgag	180
tcttgtagcc	cattcctccc	gaagctgcag	cctttttcat	cctgccatgt	atctgagtta	240
tgcacgtgcc	ttgacacctt	cactaaatca	tatataactt	gaatccgggg	actcaagggg	300
ttcaaccatc	tttgttttct	tctccattac	tgtcactgtg	ctagagccca	agtctcctga	360
aatgcgccct	ggagccttgc	tcaaagatgt	caacccaaca	tgctgatcag	gtagctatct	420
tgtctgaagc	tggtagtcca	tgacaggctc	tgacatgtgc	tgagcttgc	c	471

<210> 531

<211> 974

<212> DNA

<213> Unknown (H38g380 nucleotide)

<220>

<223> Synthetic construct

<400> 531

atgaagatca	accagacaat	cctgaaggaa	ttcattcttg	ttggcttttc	tgtgtaccca	60
catgtacaga	catttctttt	tgtgggtctt	ttttgtctct	accttctcac	ccttgcagg	120
aatctgacca	tcatgggtct	aacttgagtg	gacaggctcc	tccacacccc	tatgtatctc	180
ttccttagtg	cactctcctt	ctctgagacc	tgtatataca	tgaccatcgt	ccccagatg	240
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tgttcttctt	tgggacttgg	tggcacaaac	tgtatcttcc	tcactttgat	gggatatgac	360
cgcttctctg	ccatttgtaa	ccctctaaga	tatccactgc	ttatgaccaa	cattgtatgt	420
ggacaacttg	tggcctctgc	ttgcaactgc	ggcttcttta	tctctcttac	agagactgca	480
ctgatattca	gggactcttt	ctgcagaccc	aaccttgtca	aacacttctt	ctgccatatt	540
ctggcagtta	ttaggtctgt	ttgtatagac	agtaaccaca	cagaattcat	tataaactgt	600
atctcagtg	tcgggttggc	gggtaccctt	ctgtcatca	tcctgactga	tgtcttcatt	660
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gcctccacc	tcaccgtgg	tataatccac	tttggttttg	catctattgt	ttatttgaag	780
ccagaagcct	caggagatga	cacactcata	gcagtcctt	atactgtcat	taccccttcc	840
ctcagcccca	tcatattcag	cctgaggaat	aaggacatga	aaaatgcttt	tagaagaatg	900
atgggaaaca	cagttgcctt	gaaaaaataa	tcttgggttg	ttgctgcttg	tttgaagaag	960
ggctcaatgt	cccc					974

<210> 532

<211> 939

<212> DNA

<213> Unknown (H38g381 nucleotide)

<220>

<223> Synthetic construct

<400> 532

atggggcaga	ccaacgtaac	ctcctggagg	gattttgtct	tcctgggctt	ctccagttct	60
ggggagttgc	agctccttct	ctttgccttg	tccctctctc	tgtatctagt	cactctgacc	120
agcaatgtct	tcattatcat	agccatcagg	ctggatagcc	atctgcacac	ccccatgtac	180
ctcttctctt	ccttctctatc	cttctctgag	acctgctaca	ctttgggcat	catccetaga	240
atgctctctg	gcctggctgg	gggggaccag	gctatctcct	atgtgggctg	tgctgcccag	300
atgttctttt	ctgcctcatg	ggcctgtact	aactgcttcc	ttctgggctgc	catgggcttt	360
gacagatatg	tggccatctg	tgctccactc	cactatgcc	gccacatgaa	tcctaccctc	420
tgtgccagc	tggtcattac	ttccttctctg	actggatacc	tctttggact	gggaatgaca	480
ctagtatttt	tcacactctc	attctgcagc	tcccatgaaa	tccagcactt	tttttgtgac	540
acgccacctg	tgctgagcct	agcctgtgga	gatacaggcc	cgagtgcgct	gaggatcttt	600
atcctcagtc	ttttggctct	cttggctctcc	ttcttcttca	tcaccatctc	ctacgcctac	660
atcttggcag	caatactgag	gatccccctc	gctgaggggc	agaagaaggc	cttctccact	720
tgtgcctcgc	accttacagt	ggtcattatt	cattatggct	gtgcttcctt	cgtgtacctg	780
agggccaaag	ccagctactc	tcttgagaga	gatcagctta	ttgccatgac	ctatactgta	840
gtgaccccc	tccttaatcc	cattgtttat	agtctaagga	ctagggctat	acagacagct	900
ctgaggaatg	ctttcagagg	gagattgctg	ggtaaaagga			939

<210> 533

<211> 866

<212> DNA

<213> Unknown (H38g382 nucleotide)

<220>

<223> Synthetic construct

<400> 533

cttttgtttt	ttatccttct	gctcctcatt	tacctattca	ccatcattgg	tagtcttatg	60
gtgttctttg	ccatcaaact	ggatttctgc	ctgcacagct	ccttgatatt	cttcatcagt	120
gtcctctcct	tcctagagat	ctggataacc	accatcacca	tccccaagat	gttcttcaac	180
ctagccagtg	agcagaagac	cacctccctg	gatggttgcc	tattgcagat	gtatttcttt	240
tactccctcg	gcatactga	ggtttgcttg	ctcaccacca	gggctatgga	cagatacctg	300
gccatctgta	atcaccttg	ctacccccaca	gtcacgacac	cttagctcta	cactcagggtg	360
attctaggtt	gttgcatctg	tggttcttcc	acgctgctcc	ctgagattgc	ttggatatcc	420
acactgccat	tttggtgtcc	aaatcaaate	cacaacattt	tctgtgacct	tgatccctatc	480
ctgaatctag	catgtgtaga	cactggcccca	gttgttttaa	tcaaggttgt	ggacattgta	540
catgctgtgg	agatcatcac	agctataatg	cttgtgactt	tggcttacgt	ccaaattatt	600
gcagtgatcc	taagaaactg	ctctgctgat	ggatgccaaa	aggcattttc	tacctatgct	660
ttccaccttg	ctattttctt	aatctttttt	ggaagtgtag	ccctgatgta	cctgctcttc	720
tctgccaaag	actccttttt	ctgggacaca	accatcagcc	taatgtttgc	agtgtgtgta	780
ccgacacaat	catctgtagt	ctgaggaata	aagagataaa	ggaagcaata	aaaaagcaca	840
tgtgccaatc	aatgatatgc	acacat				866

<210> 534

<211> 954

<212> DNA

<213> Unknown (H38g383 nucleotide)

<220>

<223> Synthetic construct

<400> 534

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tgggttaagt	ctgttgtctg	ctttgttcca	ctgctcttca	tctatgcttt	cattgttgtt	120
ggaaacctgg	tcatcatcac	agtggtccag	ttgaatactc	acctccacac	tcccatgtat	180

acttttatca	gtgctctttc	tttcctggag	atttggtata	ccacagccac	aatcccaaag	240
atgctgtcta	gcctgcttag	tgagaggagc	atttccttca	atgggtgtct	cctgcagatg	300
tatttcttcc	attccaccgg	catctgtgag	gtgtgtctct	tgacagttat	ggcctttgac	360
cactacctgg	ccatatgcag	ccctcttcat	tatccctcta	tcattgacccc	caagctatgt	420
acccaactga	ctttaagttg	ctgtgtttgt	ggctttatca	caccccttcc	tgagattgcc	480
tggatctcta	cactgccatt	ttgtggttcg	aatacacttg	aacatatctt	ctgtgacttc	540
ctcccagtg	tgcgtctggc	ctgcacagac	acacgagcca	tcgtcatgat	tcaggtagtg	600
gatgtcattc	atgcagtgga	gattattaca	gctgtgatgc	tcattctcat	gtcctacgat	660
ggatttgtgg	ctgtaattct	acgtattcat	tcagctggag	gccgccgcac	agcattttcc	720
acgtgtgtct	ctcacttcat	tgtcttttct	ctcttctttg	gcagtgtgac	tctcatgtac	780
ctacgcttct	ctgccacctc	ctctttgttc	tgggatatag	ccattgctct	ggcctttgca	840
gttttgtctc	ccttcttcaa	ccccattatc	tatagcctga	ggaataaaga	aataaaagaa	900
gctataaaaa	agcacatagg	tcaagctaag	atattttttt	ccgtaagacc	aggg	954

<210> 535

<211> 386

<212> DNA

<213> Unknown (H38g384 nucleotide)

<220>

<223> Synthetic construct

<400> 535

ctactgaaac	tctcctgctc	agacacacac	ctcaatgagg	tcataatcct	tagtgagggg	60
gccctgggtca	tgatcacccc	atttctttgc	atcctggctt	cttatatgca	catcacctgc	120
actgtcctga	aggteccatc	cacaaaggga	aggtggaaag	ccttctccac	ctgtggttct	180
cacctggctg	tggttctcct	cttctacagc	accatcattg	ctgtgtattt	taaccctctg	240
tcctcccact	cagctgagaa	agacactatg	gctactgtgt	tgtatacagt	agtgactccc	300
atgctaaacc	ctttatctac	agcctgagga	acaggtactt	gaaaggggct	ctgaaaaaag	360
tagttggcag	ggtgggtgtt	tctgtc				386

<210> 536

<211> 486

<212> DNA

<213> Unknown (H38g385 nucleotide)

<220>

<223> Synthetic construct

<400> 536

ctgtcatca	tcccagccat	tgccactgac	acccggctct	ctgtgctcgt	gcgctttttc	60
cttgccaacc	tggccttcgt	ggtcacttgc	ttcacctcca	ccaccatccc	caagatgctg	120
gacgtgcaaa	gagatccctt	gtgtcatgtc	aggatgcaaa	gggattcctt	atgctgggtg	180
cctgaccag	atgctcttct	tcattctgtta	ggcatccaca	gcttctctgct	gactgcaatg	240
gccaatgaac	actgtgtggc	catctgtcac	tctctgaact	ccatcagggtc	tgtgacacca	300
tagctctgtg	gcctcctggg	ggtggcctcc	tggaccttcg	cattcaggaa	tgccctgacc	360
cacccagtgt	tactgacccg	cctctcactc	tgcacctacg	agtgggtcag	ccatgtcttc	420
tgcaacctca	gccagctgct	gaagttggcc	tgtcagacg	ccactctcaa	caatgtgacg	480
gtgcaa						486

<210> 537

<211> 980

<212> DNA

<213> Unknown (H38g386 nucleotide)

<220>

<223> Synthetic construct

<400> 537

atgttaaccc	ctaataatgc	ctgctccgtg	cctacctctt	tccgggtcac	tggcatccct	60
ggcctggaat	ccctgcacat	ctggctctcc	atcccccttg	gctccatgta	cctggtagct	120

gtgctgggga	acataaccat	cctggcagtg	gtaaggatgg	agtacagcct	gcatcagccc	180
atgtacttct	tcctgtgcat	gttggtgtgc	attgacttgg	tcctgtcaac	ctctaccatg	240
cccaaactac	tggccatctt	ctggtttggt	gcccacaaca	ttggtgttaa	tgcctgtttg	300
gcccagatgt	tcttcattca	ttgctttgcc	actgttgagt	caggcatctt	ccttgccatg	360
gcttttgatc	actatgtggc	catctgtgac	ccactgcac	ataccttgtt	gtcaccccat	420
gctgtgggtg	gtcgtttggg	gctggctgcc	ctcctccggg	gggtaatcta	cattggacct	480
ctgcccctag	tgatttgtct	gaggttgccc	ctttaccaca	cccaaatacat	tgcccattcg	540
tactgtgagc	acatggctgt	ggtcaccttg	gcatgtgggtg	tgacacaagg	gtcaacaact	600
tatatggaat	ggggattggc	tttctggtat	taatcctgga	ttcattggcc	atcactgcct	660
cctatgtgat	gattttcagg	gctgtaatgg	gcttggccac	ctctgaagcc	aggcttaaaa	720
ccttagggac	atgtggctct	cacatctgtg	ccatcctcgt	cttctacatc	cccatgtctg	780
tttctctct	cacacaccgc	tttggccatc	gtgtgcctcc	ccatatccat	atccatatcc	840
atatccatat	ccatatccat	atccttttgg	ccaacattta	cctcctcacc	ccacctatcc	900
tcaacccaat	agtctatgct	gtccgcacaa	agcagatccg	agaggctctt	ctccatatta	960
aggcaaggac	tcaaaccagg					980

<210> 538

<211> 967

<212> DNA

<213> Unknown (H38g387 nucleotide)

<220>

<223> Synthetic construct

<400> 538

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gagttggcga	gttcctcttg	ctcagcatca	ccagtgcact	agagaagcag	caggccctct	120
tctggctctt	cctgtgtatg	cacttagtca	ctgaggctgg	aaacacaccc	atcatcctgg	180
gcatcggtc	caaccctcgc	ctgcacaccc	ccacgtactt	cttcacccat	ctctcctttg	240
tcaacatctg	cttcacacc	aacctgaccc	ccaagtcctt	ggtaaccat	gtggcaggaa	300
cagggatgat	cacgatctct	tctcccagc	gcttgactca	gatgtacttc	ctcatctcct	360
ttgccaacgt	ggacaccttt	ctgctggcca	tcatggcact	ggaccactat	gtggccatct	420
gcagcgccct	gcgggtactg	tccatcatca	cccccggtc	tgtcaggggc	tggccgtgct	480
agcgtgagca	ggctccagcc	tcatctccct	ggccacacag	gtcatcatga	gcagactggc	540
cttctgctcc	tccgcccaga	tttcacactt	ctactgtgac	gcctacctgc	tcatgaagat	600
tgcctgtctc	catacatgtc	aatcagcatg	tgttccctggg	ggccgtggtc	ctgttcctgg	660
ctccctgtgc	gtcctctctg	gtctcctaca	tccgcattgc	tgcagccatc	ctccggatcc	720
cctctcctac	aagaaggcgc	aaggcatgtt	ccatatgtag	ctcccacctg	tctctggcca	780
ccctgttcta	tggaaactgtc	ctggggatct	gcatatgacc	cccagactcc	ttctcagccc	840
aggacaccat	agcaaccatc	atgtacactg	tggtagcttc	tatgtctaac	cccttcctct	900
acagtctgat	gaacaaggag	gtccaggagg	ccgtgagaag	gctcttcagt	aggggctcac	960
actcatc						967

<210> 539

<211> 603

<212> DNA

<213> Unknown (H38g388 nucleotide)

<220>

<223> Synthetic construct

<400> 539

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cccctacgac	actacataat	gtgggcaacg	cattgtcgca	ttatgtctgc	gcatgggaat	120
tgttttctcc	attcgtttgag	ccagtgggcc	tttgccgtgc	acttaccctt	ctgtgggtccc	180
aatgagttcg	atagttttta	ttgtgacctt	cctagggtaa	tcaaacttgc	ctgtacagat	240
acctacaggc	tagatattat	ggtcattgct	aacagtgggtg	tgtcactgtg	gtgttctttt	300
gttcttctaa	tcatttcata	cactatcacc	ctaataacca	tccagcatcg	cccttttagat	360
aagtcgtcca	aagctctgtc	cactttgact	gtccacatta	cagtagttct	tttgttcttt	420
ggaccatgtg	tctttattta	tgcctggcca	ttccccatca	agtcattaga	taaattcctt	480
gctgtatttt	attctgtgat	caccctcttc	ttgaacccaa	ttatatacac	actgagggaac	540

aaagacatga agacggcaat aagacagctg agaaaatggg atgcacattc tagtgtaaag 600
 ttt 603

<210> 540

<211> 935

<212> DNA

<213> Unknown (H38g389 nucleotide)

<220>

<223> Synthetic construct

<400> 540

atgctcactt	ttcataatgt	ctgctcagta	cccagctcct	tctggctcac	tggcatccca	60
gggctggagt	ccctacacgt	ctggctctcc	atcccccttg	gctccatgta	cctgggtggct	120
gtgggtggga	atgtgaccat	cctggctgtg	gtaaagatag	aacgcagcct	gcaccagccc	180
atgtactttt	tcttgtgcat	gttggctgcc	attgacctgg	ttctgtctac	ttccactata	240
cccaaacttc	tgggaatctt	ctgggttcgg	gcttgtgaca	ttggcctgga	cgccctgctt	300
ggccaaatgt	tccttatcca	ctgctttgcc	actgttgagt	caggcatctt	ccttgccatg	360
gcttttgcac	gctacgtggc	catctgcaac	ccactacgtc	atagcatggt	gctcacttat	420
acagtgggtg	gtcgtttggg	gcttgtttct	ctcctccggg	gtgttctcta	cattggacct	480
ctgcctctga	tgatccgcct	ggggtgcgcc	ctttataaaa	cccatgttat	ctccactccc	540
tactgtgagc	acatggctgt	agttgccttg	acatgtggcg	acagcaaggt	caataatgtc	600
tatgggatga	gcacggcctt	tctgggtgtg	atcatggaat	cagtggatag	tgatgcatca	660
taggtgagga	gtatcagggc	cgtgatgggg	ttagccaatc	atgaggatag	gattagagac	720
catggggaca	ggcgaatatc	acatatgtgc	catcatgata	ttataggatc	ccagtgatgt	780
atattccatg	agatcaccca	gatggctcagt	gtgtgcatca	tccagtcacc	aatatgatgg	840
ccaggatata	tatcatcagt	catccaagca	tcaagcccg	tgtataggat	gatcgcacca	900
agcagagccg	agagagctat	atccaaagag	caaga			935

<210> 541

<211> 945

<212> DNA

<213> Unknown (H38g390 nucleotide)

<220>

<223> Synthetic construct

<400> 541

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cacagtactg	ctgaccttgt	cctcttctcc	gtggttatgg	cggtcttcac	agtggccctc	120
tgtgggaatg	tcctcctcat	cttcctcatc	tacatggacc	ctcaccttca	cacccccatg	180
tacttcttcc	tcagccagct	ctccctcatg	gacctcatgt	tggtctgtac	caatgtgcca	240
aagatggcag	ccaacttctt	gtctggcagg	aagtccatct	cctttgtggg	ctgtggcata	300
caaattggcc	tccttgtctg	tcttgtggga	tctgaggggc	tcttgtctgg	actcatggct	360
tatgaccgct	atgtggccat	tagccacca	cttcactatc	ccatcctcat	gaatcagagg	420
gtctgtctcc	agattactgg	gagctcctgg	gcctttggga	taatcgatgg	cttgatccag	480
atgggtgtag	taatgaattt	cccctactgt	ggcttgagga	aggtgaacca	tttcttctgt	540
gagatgctat	ccttgttgaa	gctggcctgt	gtagacacat	ccctgtttga	gaagggtgata	600
tttgccttgc	gtgtcttcat	gcttctcttc	ccattctcca	tcacgtggc	ctcctatgct	660
cacattctag	ggactgtgct	gcaaatgcac	tctgctcagg	cctggaaaaa	ggccctggcc	720
acctgctcct	cccacctgac	agctgtcacc	ctcttctatg	gggcagccat	gttcatctac	780
ctgaggccta	ggcactaccg	ggccccagc	catgacaagg	tggcctctat	cttctacacg	840
gtccttactc	ccatgctcaa	ccccctcatt	tacagcttga	ggaacagggg	ggatgatggg	900
gcactgagga	aggggctgga	ccgctgcagg	atcggcagcc	agcac		945

<210> 542

<211> 975

<212> DNA

<213> Unknown (H38g391 nucleotide)

<220>

<223> Synthetic construct

<400> 542

atgggaagat	gggtgaacca	gtcctacaca	gatggcttct	tcctcttggg	catcttttcc	60
cacagccaga	ctgacctgtg	cctcttctct	gcagttatgg	tggtcttcac	agtggccctc	120
tgtgggaatg	tcctcctcat	cttcctcatc	tacctggacg	ctggacttca	cacccccatg	180
tactttctcc	tcagccagct	ctccctcatg	gacctcatgt	tggtctgtaa	cattgtgcca	240
aagatgcagc	caacttcctg	tctggcagaa	gtccatctcc	tttgtgggct	gtggcataca	300
aattggcttt	tttgtctctc	tttgtgggatc	tgaggggctc	ttgctgggac	tcattggctta	360
tgaccgctac	gtggccggtta	gccacccact	tcactatccc	atcctcatga	atcagagggt	420
ctgtctccag	attactggga	gctcctgggc	ctttgggata	atagatggag	tgattcagat	480
gggtggcagcc	atgggcttac	cttactgtgg	ctcaaggagc	gtggatcaact	ttttctgtga	540
gggtacaagct	ttattgaagc	tggcctgtgc	agacacttcc	ctttttgaca	ccctcctctt	600
tgctgtctgt	gtcttcatgc	ttctccttcc	cttctccatc	atcatggcct	cctatgcttg	660
catcctaggg	gctgtgctcc	gaatacgcct	tgctcaggcc	tggaaaaaag	ccctggccac	720
ctgctcctcc	acctaacagc	tgtcaccctc	ttctatgggg	cagccatggt	catgtacctg	780
aggcctaggg	gctaccgggc	ccctagccat	gacaagggtg	cctctatctt	ctacacagtc	840
cttactccca	tgctgaaccc	cctcatttac	agcttgagga	atggggaggt	gatgggggca	900
ctgaggaagg	ggctggaccg	ctgcaggatt	ggcagccagc	actgaacccc	agagtctggt	960
gcctgtctgt	ccct					975

<210> 543

<211> 942

<212> DNA

<213> Unknown (H38g392 nucleotide)

<220>

<223> Synthetic construct

<400> 543

atgggggatg	tgaatcagtc	gggtggcctca	gacttcattc	tggtgggcct	cttcagtcac	60
tcaggatcac	gccagctcct	cttctccctg	gtggctgtca	tgtttgatcat	aggccttctg	120
ggcaacaccg	ttcttctctt	cttgatccgt	gtggactccc	ggctccacac	acccatgtac	180
ttcctgctca	gccagctctc	cctgtttgac	attggctgtc	ccatgggtcac	catccccaag	240
atggcatcag	actttctgcg	gggagaaggt	gccacctcct	atggagggtg	tgagctcaa	300
atattcttcc	tcacactgat	gggtgtggct	gagggcgctc	tggttggtcct	catgtcttat	360
gaccgttatg	ttgctgtgtg	ccagcccttg	cagtatcctg	tacttatgag	acgccaggta	420
tgctgctga	tgatgggctc	ctcctgggtg	gtagggtgtg	tcaacgcctc	catccagacc	480
tccatcaccc	tgcattttcc	ctactgtgcc	tcccgtattg	tggtatcactt	cttctgtgag	540
gtgccagccc	tactgaagct	ctcctgtgca	gatacctgtg	cctacgagat	ggcgtgtgcc	600
acctcagggg	tgctgatcct	aatgctccct	ctttccctca	tcgccacctc	ctacggccac	660
gtgttgacag	ctgtttctaag	catgcgtcca	gaggaggcca	gacacaaggc	tgccaccacc	720
tgctcctcgc	acatcacggg	agtggggctc	ttttatgggt	ccgccgtgtt	catgtacatg	780
gtgccttgcg	cctaccacag	tccacagcag	gataacgtgg	tttccctctt	ctatagcctt	840
gtcaccccta	cactcaaccc	ccttatctac	agtctgagga	atccggaggt	gtggatggct	900
ttggtcaaag	tgcttagcag	agctggactc	aggcaaatgt	gc		942

<210> 544

<211> 350

<212> DNA

<213> Unknown (H38g393 nucleotide)

<220>

<223> Synthetic construct

<400> 544

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cctatcttat	atctttatcc	cttcaggcag	ttctacaact	ctcctctcag	aggcccgtca	120
caaagcattt	gggacatgtg	tctctcacat	agggtgccatc	ttagccttct	acacaccttc	180
agtcattctt	tcagtcatgc	accgtgtggc	ccgtctgtgt	gcgccacacg	tccacattct	240
cctcgccaat	ttctatctgc	tcttcccacc	catggtcaat	cccatcatct	acggcggtta	300

gaccaagcag atccgtgaca gtcttgggag tattcccgag aaaggatgtg

350

<210> 545

<211> 948

<212> DNA

<213> Unknown (H38g394 nucleotide)

<220>

<223> Synthetic construct

<400> 545

atgcctagtc	agaactatag	catcatatct	gaatttaacc	tctttggctt	ctcagccttc	60
ccccagcacc	tcctgcccac	cttggttcctg	ctgtacctcc	tgatgttcct	gttcacattg	120
ctgggcaacc	ttctcatcat	ggccacaatc	tggattgaac	acagactcca	cacacccatg	180
tacctcttct	tgtgcaccct	ctccgtctct	gagattctgt	tcactgttgc	catcacccct	240
cgcattgctg	ctgatctgct	ttccacccat	cattccatca	cctttgtggc	ttgtgccaac	300
cagatgttct	tctccttcat	gtttggcttc	actcactcct	tccttctcct	ggtcatgggc	360
tatgatcgct	atgtggccat	ctgccacca	ctgcgttaca	atgtgctcat	gagccccctg	420
gactgtgccc	atcttgtggc	ctgtacctgg	gctgggtggc	cagtcattgg	gatgatgggtg	480
acaacgatag	ttttccacct	cactttctgt	gggtctaatg	tgatccacca	ttttttctgt	540
catgtgcttt	ccctcttgaa	gttggcctgt	gaaaacaaga	catcatctgt	catcatgggt	600
gtgatgctgg	tgtgtgtcac	agccctgata	ggctgtttat	tcctcatcat	cctctcctat	660
gtcttcattg	tggctgccat	cttgaggatt	ccctctgccc	aaggccggca	caagacattt	720
tctacgtgtg	tatcccacct	cactgtgggtg	gtcacgcact	atagttttgc	ctcctttatc	780
tacctcaagc	ccaagggcct	ccattctatg	tacagtgaag	ccttgatggc	caccacctat	840
actgtcttca	cccccttct	tagcccaatc	attttcagcc	taaggaaaca	ggagctgaag	900
aatgccataa	ataaaaactt	ttacagaaaa	ttctgtcctc	caagttcc		948

<210> 546

<211> 990

<212> DNA

<213> Unknown (H38g395 nucleotide)

<220>

<223> Synthetic construct

<400> 546

atgtgttctt	ttttcttgtg	ccaaacaggt	aaacaggcaa	aaatatcaat	gggagaagaa	60
aaaccaaacct	ttgtgtccaa	gtttatcttc	ctgggtcttt	cacaggactt	gcagacccag	120
atcctgctat	ttatcctttt	cctcatcatt	tatctgctga	ccgtgcttgg	aaaccagctc	180
atcatcattc	tcattcttct	ggattctcgc	cttcacactc	ccatgtattt	ttttcttaga	240
aatctctcct	ttgcagatct	ctgtttctct	actagcattg	tcctcaagt	gttggttcac	300
ttcttggtaa	agaggaaaac	catttctttt	tatgggtgta	tgacacagat	aattgtcttt	360
cttctgggtg	ggtgtacaga	gtgtgcgctg	ctggcagtg	tgctctatga	ccgggtatgtg	420
gctgtctgca	agccctgta	ctactctacc	atcatgacac	aacgggtgtg	tctctggctg	480
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ctgaagctgg	cttccataga	cacttacagc	acagaaatgg	ccatcttttc	aatgggcgtg	660
gtaatcctcc	tggcccctgt	ctccctgatt	cttgggtctt	attggaatat	tatctccact	720
gttatccaga	tgcagtctgg	ggaagggaga	ctcaaggctt	ttccacctg	tggctcccat	780
cttattgttg	ttgtcctctt	ctatgggtca	ggaatattca	cctacatgcg	accaaactcc	840
aagactacaa	aagaactgga	taaaatgata	tctgtgttct	atacagcggt	gactccaatg	900
ttgaaccca	taatttatag	cttgaggaa	aaagatgtca	aaggggctct	caggaaacta	960
gttgggagaa	agtgttcttc	tcataggcag				990

<210> 547

<211> 676

<212> DNA

<213> Unknown (H38g396 nucleotide)

<220>

<223> Synthetic construct

<400> 547

ggaaaggaaa	gagagacacg	ggtctggagg	ccgagagcgc	aagaccgggg	ggtgagcacc	60
cggcacgctg	cgagggtaac	aagctatcag	gaatgcgggg	tccgtggcgg	gggagtgttg	120
tgggcgcggt	taggccgagt	ccttttagacg	cccagctgca	caacgtgatt	gcctacagaa	180
ggacctgctt	caaggatgtg	gaaattccga	atttcgctgt	gacccttctc	aattccccgt	240
cttgcatgtg	tggcaccttc	accaataaca	taatcatgta	tttccctgct	gccatatttg	300
gtttttcttc	catctcgggg	acccttttct	cttacgataa	aattgttttc	tccattctga	360
gggttttcac	atcaggtggg	aagcataagg	ccttctccac	caggggggtct	cacctgtcag	420
ttgtttgctg	attttatgga	acaggcattg	gaggctacct	cagttcagat	gtgtcâtctt	480
ccccgagaaa	ggctgcagtg	gcctcagtga	tgtacacggt	ggccatcccc	atgctgaacc	540
ccttcatcta	cagcctgaga	aacagggata	ttaaaagtgt	cctgcggcac	cgacaggcag	600
cacgggtctca	tctcaatata	ttcttatctg	ttccattcct	ttttagtagt	gggttaaaaa	660
aggcagcaag	gtcaaa					676

<210> 548

<211> 992

<212> DNA

<213> Unknown (H38g397 nucleotide)

<220>

<223> Synthetic construct

<400> 548

atgaaaatct	tcaacacccc	cagcaactcc	agcaccttca	ctggcttcat	cctcctgggc	60
ttcccttgcc	ccaggagggg	acagatcctc	ctcgttgtgc	tcttcaactgt	tgtttacctc	120
ctgaccctca	tgggcaatgg	ttccatcaac	tgtgctgtgc	actgggtcag	agactccatg	180
cccccatgta	catcctgctc	gccaaacttct	ccttcctgga	gatctgttat	gtcacctcta	240
cagtccecaa	cgtgctggcc	aacttcctct	ctgacacaag	atcatctcgt	tctctggctg	300
cttccctcaa	ttctactttt	ttttctcctt	gggctctaca	gaatgctttt	tcctgggagc	360
tatggcattt	gacctatacc	ttgccatctg	ccggcctcta	cgctatccaa	ccattatgac	420
cagacgtctc	tgcaacattc	ttgtgggcag	ctgctgggta	cttggtttct	tgtggttcct	480
gattcctatc	agtgctattt	ctcaaatac	ctgtggatct	aggattattg	accacttccc	540
atgtgaccca	ggcctctctg	tagccctcac	ctgtgccaga	gcccctctac	tagagttgac	600
tagctccacc	ttaagtctc	tacttctatt	tattcccttt	ctcttcatcg	tgggggtgcta	660
tgctctggtc	ctgagagctg	tgttgagggt	tccttcagca	tctggaagaa	gaaaggcttt	720
ctctacctgt	ggctcccacc	tggctgtagt	ttcactgttt	atggctcaat	gatgatcacg	780
tatgtgagcc	caacatctgg	gcatgaattc	ggaatgcaga	agactgtgac	tctgttctat	840
tctgtggtea	ctccccttat	taatectgtc	atatacagtc	tgaggaacaa	ggaaatgaaa	900
catgcaatga	ggaactacac	tgtaatgttt	tattttctag	aattcatagg	gctacaagag	960
atgtcaaaga	tgtattctat	ctctttaatt	tt			992

<210> 549

<211> 805

<212> DNA

<213> Unknown (H38g398 nucleotide)

<220>

<223> Synthetic construct

<400> 549

ttctcaagta	tatatgcttg	tatatatcag	atctctatct	caactatcta	tctaatacatc	60
tatctatatt	taaattagta	gactggatta	tcaattgtta	tttgtattat	attttacagc	120
ctactcaact	tattctagca	gttcattttac	acttgtgaaa	tgaatcaatt	taaatagtaa	180
caaaatagga	acaatctgac	aacttttttag	ggatacttct	actcaggaat	atgtggcagg	240
agaaactgta	caatgtgatt	gataacaatc	ttcattttga	aatattgcta	gcatggcttc	300
atcacaattc	actctgtcat	ggacagtggg	cagcacttgg	ccatctgccca	cccactgcac	360
taccttatcc	tcatgactga	tgaaaataga	gatcgaatgt	ttatgggccc	gctgacagcc	420
tttccctaca	ccgatgccac	atctcagaac	atgcactatg	ttaaattttct	tattatcatt	480
ctcagtattt	tgtacatccc	tggaccatat	acgttgatcc	taagagctat	gcttcagctg	540

ctttcagcag	ctagccatca	aaatgccttt	tctatccgtg	ggctctcactt	aatagtggtg	600
tctctgttct	gtgaaacat	atgatgatgt	gtgtgaatct	catactctgac	catttagtat	660
aaatgaagat	gacaaatcac	aatatcataa	tgatatactc	cataaagact	ctagttttta	720
actttgtcaa	ttacacctta	ctcaatatga	acttaaaacc	tatcttcagt	ttttttttta	780
tggaatgagt	attagccaaa	gctca				805

<210> 550

<211> 933

<212> DNA

<213> Unknown (H38g399 nucleotide)

<220>

<223> Synthetic construct

<400> 550

atgaaaatct	tcaacagccc	cagcaactcc	agcaccttca	ctggcttcat	cctcctgggc	60
ttcccttgcc	ccagggaggg	gcagatccct	ctctttgtgc	tcttcaactgt	tgtttacctc	120
ctgaccctca	tgggcaatgg	ttccatcatc	tgtgctgtgc	actgggatca	gagactccac	180
gccccatgt	acatcctgct	cgccaacttc	tccttcttgg	agatatgtta	tgtcacctcc	240
acagtcccca	gcatgctggc	caacttcctc	tctgacacca	agatcatctc	gttctctggc	300
tgcttcctcc	agttctactt	tttcttctcc	ttgggctcta	cagaatgctt	tttcttgcca	360
gttatggcat	ttgatcgata	ccttgccatc	tgtcggcctc	tacgctatcc	aaccattatg	420
accagacgtc	tctgtaccaa	tcttgtgggc	aattgctggg	tacttggttt	catctgggtc	480
ttgattccta	tcgtcaacat	ctcccaaatg	tccttctgtg	gatctaggat	tattgaccac	540
ttcctatgtg	acccagctcc	tcttctaact	ctcacttgca	aaaaaggccc	tgtgatagag	600
cttgtctttt	ctgtcttaag	tcctctgcct	gtctttatgc	tctttctctt	cattgtgggg	660
tcctatgctc	tggtcgtgag	agctgtgttg	agggtccctt	cagcagctgg	gagaagaaa	720
gctttctcca	cctgtgggtc	tcacctggct	gtggtttcac	tgttctacgg	ctcagtactg	780
gtcatgtatg	ggagcccacc	atctaagaat	gaagctggaa	agcagaagac	tgtgactctg	840
ttttattctg	ttgttaccct	actgcttaac	cctgtgatat	atagtcttag	gaacaaagat	900
atgagaaaag	ctctgaagaa	attttgggga	aca			933

<210> 551

<211> 977

<212> DNA

<213> Unknown (H38g400 nucleotide)

<220>

<223> Synthetic construct

<400> 551

acagccctgg	aattcacaaa	caattcagag	acaagcacta	tgacggaatt	tgttctcctt	60
ggctttcctg	gttgtcagga	gatgcaaagt	ttcctcttct	ccctgttctt	tgtgatctat	120
gtattttacca	taataggaaa	tgggaccatt	gtctgtgctg	tgagattgga	caaacggctt	180
cataccccaa	tgtatattct	cctagggaa	tttgccttcc	ttgaaatccg	gtaagttact	240
tcactgttac	ccaacatgct	agtcaacttc	ctctcagaga	caaaaacat	ctcttttgtt	300
ggctgttttc	tcagtttcta	cttttttact	tccttgggta	caatagaagc	atacttcttc	360
tgcatcatgg	catatgatcg	gtaccttgct	atctgccgcc	cattgcaacta	cccaaccatc	420
atgacccccc	aactctgcta	catattgatg	tccttttgcct	gggtgtttgg	attcctcagt	480
tactctgtct	ccactgtgca	actgtctcaa	ctgcctttct	gtgggcccac	catcatcaat	540
cactttttgt	gtgacatgga	cccactgatg	gctctgtcct	gtgcctcagc	tcctatcact	600
gagattatct	tctatatact	gagctccctc	attatcattc	tcactcttct	gtacatctgt	660
ggctcctata	tgctttactg	atagctgtat	taaaagtccc	ttcagcagct	ggccagcaga	720
aggccttttc	cacctgtgga	tctcatctga	cagtgggtgtg	tttattcttt	ggggccctac	780
tggcaatgta	tgtgagcccc	acaactgata	acccagctgc	aatttagaag	attataactt	840
tgttctatct	tgtggtgacc	cccttcttaa	acccctgat	ttacagctta	cgaacaaaag	900
agatgaaggc	tgcggtgaag	aaagtctctga	ggatagaatg	agaataaagt	catctacatg	960
agaccaagca	aaccatt					977

<210> 552

<211> 945

<212> DNA

<213> Unknown (H38g401 nucleotide)

<220>

<223> Synthetic construct

<400> 552

atggagagcg	gaaaccaatc	aacagtgact	gaatttatct	tactggatt	ccctcagctt	60
caggatggta	gtctcctgta	cttctttcct	ttacttttca	tctatacttt	tattatcatt	120
gataacttat	taatcttctc	tgctgtaagg	ctggacaccc	atctccacaa	ccccatgtat	180
aattttatca	gtatatcttc	ctttctggag	atctggtaca	ccacagccac	cattcccaag	240
atgctctcca	acctcatcag	tgaaaagaag	gccatctcaa	tgactggctg	catcttgtag	300
atgtatttct	tccactcact	tgaaaactca	gaggggatct	tgctgaccac	catggccatt	360
gacagatacg	ttgccatctg	caacctctct	cgctatcaaa	tgatcatgac	ccccgggctc	420
tgtgctcaac	tctctgcagg	ttcttgcttc	ttcgggttcc	ttatcctgct	tcccgagatt	480
gtgatgattt	ccacactgcc	ttctgtggg	cccaaccaa	tccatcagat	cttctgtgac	540
ttgggtccctg	tgctaagcct	ggcctgtaca	gacacgtcca	tgattctgat	tgaggatgtg	600
attcatgctg	tgaccatcat	cattaccttc	ctaactattg	ccctgtccta	tgtaagaatt	660
gtcactgtga	tattgaggat	tccctcttct	gaagggaggc	aaaaggcttt	ttctacctgt	720
gcaggccacc	tcatgggtct	cctgatattc	tttggcagtg	tatcactcat	gtacttgctg	780
ttcagcgaca	cttatccacc	agttttggac	acagccattg	cactgatgtt	tactgtactt	840
gctccattct	tcaatcccat	catttatagc	ctgagaaaca	aggacatgaa	caatgagatt	900
aaaaaactgt	tctgtcttca	aaaagtgttg	aacaagcctg	gaggt		945

<210> 553

<211> 921

<212> DNA

<213> Unknown (H38g402 nucleotide)

<220>

<223> Synthetic construct

<400> 553

atgcattttg	tgactgagtt	tgctctcctg	ggtttccatg	gtcaaaggga	gatgcagagc	60
tgcttcttct	cattcaccct	ggttctctat	ctcctgacac	tgctagggaa	tgagagctatt	120
gtctgtgcag	tgaaattgga	caggcggtc	cacacaccca	tgatcatcct	tctgggaaac	180
tttgcccttc	tagagatctg	gtacatttcc	tccactgtcc	caaacatgct	agtcaatata	240
ctctctgaga	ttaaaacat	ctccttctct	ggttgcttcc	tgcaattcta	tttctttttt	300
tactgggta	caacagagtg	tttcttttta	tcagttatgg	cttatgatcg	gtacctggcc	360
atctgtcgtc	cattacacta	cccctccatc	atgactggga	agttctgtat	aattctggtc	420
tgtgtatgct	gggtaggcgg	atttctctgc	tatccagtc	ctattgttct	tatctcccaa	480
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gcactggcct	gcactctctg	tccttccact	gagcttatct	gttacacctt	caactcgatg	600
attatctttg	ggccttccct	ctccatcttg	ggatcttaca	ctctgggtcat	cagagctgtg	660
ctttgtattc	cctctggtgc	tggtcgaaact	aaagctttct	ccacatgtgg	gtcccaccta	720
atggtggtgt	ctctatttcta	tggaaccctt	atggtgatgt	atgtgagccc	aacatcaggg	780
aaccagcag	gaatgcagaa	gatcatcact	ctggtataca	cagcaatgac	tccattctta	840
aatcccctta	tctatagtct	tcgaaacaaa	gacatgaaag	atgctctaaa	gagagtctctg	900
gggttaacag	ttagccaaaa	c				921

<210> 554

<211> 768

<212> DNA

<213> Unknown (H38g403 nucleotide)

<220>

<223> Synthetic construct

<400> 554

atgtataatt	ttatcagcat	tttctcattt	ctggagatct	ggtacacaac	tgccacaatt	60
cccaagatgc	tctccatcct	catcagcagg	cagaggacca	tctccatggt	tggtgcctc	120

ttgcagatgt	acttcttcca	ttcactggga	aattcagagg	ggattttggt	gaccaccatg	180
gccattgata	ggtacgttgc	catctgtaac	cctctccgct	acccaacccat	catgaccccc	240
gggctctgtg	ttcagctctc	tgtgggggtcc	tgcactcttg	gctttcttgt	gttgctccca	300
gagattgcat	ggatttccac	actgcccttc	tgtggaccca	accaaatacca	ccagatcttc	360
tgtgattttg	aacctgtgct	gcgcttgccc	tgtacagaca	cgtccatgat	tctgattgag	420
gatgtgatcc	atgctgtggc	cattgtattc	tctgtcctga	ttattgccct	ttcttatatc	480
agaatcatca	ctgtaatcct	gaggattccc	tctgttgaag	gccgccagaa	ggccttttct	540
acctgtgccg	cccatcttag	tgtctttctg	atgttctatg	gcagtgtatc	cctcatgtac	600
ctgcgtttct	ctgccacttt	cccaccgatt	ttggacacag	ctgttgcact	gatgtttgca	660
gttcttgctc	cctttttcaa	ccctatcatc	tatagcttta	gaaataagga	catgaagatt	720
gcaattaaaa	agcttttctg	ccctcagaag	atgggttaatt	tatctgta		768

<210> 555

<211> 960

<212> DNA

<213> Unknown (H38g404 nucleotide)

<220>

<223> Synthetic construct

<400> 555

agtctgggaa	gcatgaataa	ctcacagata	tctactgtga	cgcagtttgt	gttggtgggg	60
tttcttggtc	cctggaaaat	tcagatcatc	ttttctcaa	tgattttggt	ggtctacatc	120
ttcactctga	ctgggaatat	ggccatcatc	tgtgcagtga	ggtgggacca	tcgactccat	180
accctatgt	acgtgtcct	agccaacttc	tccttcctag	agatctggta	tgtgacctgc	240
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tgtttcactc	agttccactt	cttcttttcc	ctgggcacaa	ctgaatgctt	cttctcttgt	360
gtcatggctt	atgatcggtg	cctggccatc	tgccaccac	tgactatcc	ctccattatg	420
actggccagc	tctgtggcat	cctgggtgtc	ctttgttggc	tcattgggtt	ccttggacat	480
tcaatttcca	ttttcttcat	ttttcaacta	cctttctgtg	gtcccaacat	cattgatcat	540
tttctgtgtg	atgtagacct	actgatggca	ttgtcctctg	cccctactca	catcataggg	600
catgtgttcc	attctgtgag	ctctcttttc	atcaacctca	ccatgggtga	catccttggg	660
tcctatacct	tggtgtcag	aactgtgctt	taggttcctt	cttcagctgg	atggcaaaag	720
gccatctcta	cctgtgggtc	acacttggtt	gttggtgtct	tgctctatgg	agccataatg	780
ctgatgtatg	tgagtccac	acctggcaac	tcagtgtcta	tgcataagct	catcacactg	840
atatattctg	tggtaacacc	tgtcttaaac	cccctcatct	acagcctacg	caacaaggac	900
atgaaatatg	ccctccatca	tgtcttctgt	ggaatgagaa	ttatccagag	atcatgaata	960

<210> 556

<211> 957

<212> DNA

<213> Unknown (H38g405 nucleotide)

<220>

<223> Synthetic construct

<400> 556

atggatccag	agaatcagac	aatggtgact	gagttttatt	tctctgattt	tcctcaatct	60
aagaatggca	gcctcttatt	cttcattcct	atgctcttta	tttatatatt	cattcttgggt	120
ggaaatttca	tgattttctt	tgtgttccaa	ccggaccccc	atctccataa	tcctatgtac	180
agttttatca	gtgtcttctc	cttcttgagg	atgttggtaca	ccaccgtgac	tatccccaa	240
atgctctcca	acctcttcag	tgaacagaaa	accatctctt	tcataggttg	cctcctgcag	300
atgtacttct	tccactcact	cggggtcaca	gaagccctag	tcctcacagt	gatggccatt	360
gacaggtgtg	tagccatctg	caacccctt	cgctatgcaa	tcactatgtc	cccttgactg	420
tgcatccagc	tctccactgg	ctcttgcat	tttggcttcc	tcattgttact	gccagagatt	480
gtgtgcattt	ccactcttcc	attctgtggc	gccaaccaa	ttcatcaact	cttttgtgac	540
tttgaacctg	tgctgcagtt	agcctgcaca	gatacgtaca	taattctggg	tgaagatgtg	600
atccgtgcta	tttccattct	gacctctgtc	tctgtcatca	cccttttcta	tttaagaatc	660
atcacggtga	tcctgaggat	tccctctggg	gagagtcgtc	agaaggcttt	cttcacatgt	720
gcagcccaca	ttgctatttt	cttgtgtgtt	tttggcagtg	tgctactcat	gtatctgcgc	780
ttctctgtca	cattcccacc	attactggac	aaggccattg	cactgatgtt	tgctgtcctt	840

gccctacttt tcaaccaggt aatctatagt ctgaggaaca aagatatgaa aaacgccacc 900
aagaaaatcc tctgtttctca aaagatgttc aatgcctctg ggagctaata gagttca 957

<210> 557

<211> 951

<212> DNA

<213> Unknown (H38g406 nucleotide)

<220>

<223> Synthetic construct

<400> 557

atgacacagt	tgacggccag	tgggaatcag	acaatgggtga	ctgagttcct	cttctctatg	60
ttcccgcagt	cgcacagagg	tggcctctta	ttctttatct	ccttgcttct	catctacgga	120
tttatccetaa	ctggaaacct	aataatgttc	attgtcatcc	agggtggcat	ggccctgcac	180
acccttttgt	atttctttat	cagtgtcctc	tccttccctgg	agatctgcta	taccacaacc	240
accatcccca	agatgctgtc	ctgcctaata	agtgagcaga	agagcatttc	cgtggctggc	300
tgctctctgc	agatgtactt	tttccactca	cttgggtatca	cagaaagctg	tgtcctgaca	360
gcaatggcca	ttgacaggta	catagctatc	tgcaatccac	tccgttacct	aaccatcatg	420
attcccaaac	tttgtatcca	gctgacagtt	ggatccctgct	tttgtggctt	cctccttggtg	480
cttcttgaga	ttgcatggat	ttccaccttg	cctttctgtg	gctccaacca	gatccaccag	540
atattctgtg	atttcacacc	tgtgctgagc	ttggcctgca	cagatacatt	cctagtgggtc	600
attgtggatg	ccatccatgc	agcggaaatt	gtagcctcct	tcctgggtcat	tgctctatcc	660
tacatccgga	ttattatagt	gattctggga	atgcactcag	ctgaagggtca	tcacaaggcc	720
ttttccacct	gtgctgctca	ccttgctgtg	ttcttgctat	tttttggcag	tgtggctgtc	780
atgtatttga	gattctcagc	cacctactca	gtgttttggg	acacagcaat	tgctgtcact	840
tttgttatcc	ttgctccctt	tttcaacccc	atcatctata	gcctgaaaaa	caaggacatg	900
aaagaggcta	ttggaaggct	tttccactat	cagaagaggg	ctggttgggc	t	951

<210> 558

<211> 831

<212> DNA

<213> Unknown (H38g407 nucleotide)

<220>

<223> Synthetic construct

<400> 558

atggctctaa	ttggaaacct	atccatgatt	cttctcatct	tcttggacac	ccatctccac	60
acacccatgt	atttcctact	tagtcagctc	tccttcattg	acctaaatta	catctccacc	120
attgttctta	agatggcatc	tgattttctg	tctggtaaca	agtctatctc	cttccactggg	180
tgtgggattc	agagtttctt	cttctcggca	ttaggaggtg	cagaagcact	acttttggca	240
tctatggcct	atgatcggtta	cattgctatt	tgctttcctc	ttcactatcc	catccgcagt	300
agcaaaagaa	tgtgtgtgct	gatgataaca	gggtcttggg	tcataggctc	gatcaatgct	360
tgtgtctaca	ctgtatatgt	actccatatt	ccttattgcc	aatccagggc	catcaatcat	420
ttcttctgtg	atgtcccagc	aatggtgact	ctggcctgca	tggacacctg	ggctctatgag	480
ggcacagtgt	ttttgagcac	caccatcttt	ctcgtgtttc	ccttcattgc	tatttcatgt	540
tcctatggcc	gggttctcct	tgctgtctac	cacatgaaat	ctgcagaagg	gaggaagaaa	600
gcctacctga	cctgcagcac	ccacctcact	gtagtaactt	tctactatgc	accttttgtc	660
tacacttacc	tacgtccaag	atccctgcga	tctccaacag	aggacaaggt	tctggctgtc	720
ttctacacca	tctcaccctc	aatgctcaac	cccatcatct	atagcctgag	gaacaaggag	780
gtgatggggg	ccctgacacg	agtgagtcag	agaatctgct	ctgtgaaaat	g	831

<210> 559

<211> 725

<212> DNA

<213> Unknown (H38g408 nucleotide)

<220>

<223> Synthetic construct

<400> 559

atggatagag	taaataattc	tgcggtatct	aaatttgtat	tgattggact	ttcaagctct	60
tgggagatgc	atctttttct	tttttgggtc	ttctctgtgt	tctacatggg	aattatcctg	120
gaaaatctct	tcatttgtgt	cacagtaatt	attgactctc	atttaaattc	cccagggtact	180
gcctactggc	caacatttat	cttcttgatc	tgggtcttct	cctacagttc	tgactttttc	240
actaactgca	gcatcatttc	ttttccaaga	tgcattgatac	agataattttt	catttgtgtc	300
atgctgaaaa	attgagatgg	tgctgctcat	aacctatggc	tagagcagggt	acactgccaa	360
tctgtaagcc	tccccattac	ctgaccacaa	tgaaccccaa	aatgtgtgtt	tcctttgttg	420
gaggcatcct	ggatagtcag	gataatccat	gctgtatctc	agtttgtttt	tgccataaac	480
ttgccttttt	gtggccctaa	tagagtaggt	agttttcact	gtgattttcc	ttatgtcatg	540
aaacttgctt	gtgtagatac	ttacaaacta	gaggttgtag	tcactgctaa	cagtgggctt	600
atatccatag	ctacctgttt	cttattaata	atatcctata	ttttcatttc	ggtaaccgtc	660
tagaatcctt	cttcaggaga	cttatctaaa	gcatttgtgt	catgttagat	cacatcacag	720
taggg						725

<210> 560

<211> 936

<212> DNA

<213> Unknown (H38g409 nucleotide)

<220>

<223> Synthetic construct

<400> 560

atggacacag	ggaactggag	ccaggtagca	gaattcatca	tcttgggctt	ccccatctc	60
cagggtgtcc	agattttatct	cttcctcttg	ttgcttctca	tttacctcat	gactgtgttg	120
ggaaacctgc	tgatattcct	ggtgggtctgc	ctggactccc	ggcttcacac	acccatgtac	180
cactttgtca	gcattctctc	cttctcagag	cttggctata	cagctgccac	catccctaag	240
atgctggcaa	acttggttcag	tgagaaaaag	accatttcat	tctctgggtg	tctcctgcag	300
atctattttc	ttcactccct	tggagcgact	gagtgtctatc	tcctgacagc	tatggcctac	360
gataggatatt	tagccatctg	cgggcccctc	cactacccaa	ccctcatgac	cccaacactt	420
tgtgcagaga	ttgccattgg	ctggttggtg	ggaggcttgg	ctgggcccagt	agttgaaatt	480
tccttgattt	cacgcctccc	attctgtggc	cccaatcgca	ttcagcacgt	cttttgtgac	540
ttccctcctg	tgctgagttt	ggcttgcact	gatacgtcta	caaagtctct	agtagatttt	600
gttataaatt	cctgcaagat	cctagccacc	ttcctgctga	tcctctgctc	ctatgtgcag	660
atcatctgca	cagtgtctcag	aattccctca	gctgccggca	agaggaaggc	catctccacg	720
tgtgcctccc	acctcactgt	ggttctcctc	ttctatggga	gcataccttc	catgtatgtg	780
cggctgaaga	agactgactc	actggactat	gaccaggccc	tggcagtggt	ctactcagtg	840
ctcacaccct	tcctcaaccc	cttcattctac	agcttgcaca	acaaggagat	caaggaggct	900
gtgaggaggc	agctaaagag	aattgggata	ttggca			936

<210> 561

<211> 635

<212> DNA

<213> Unknown (H38g410 nucleotide)

<220>

<223> Synthetic construct

<400> 561

gaattccttt	tttataatta	caatcaaaca	tcaactgatt	tcattcttatt	ggggctgttc	60
ccacaatcaa	gaattggcct	tttcgtatct	accctcattt	ttctcatttt	cctaattggct	120
ctaattggaa	atctatccat	gattcttctc	atcttttttg	acatccatct	ccacacacct	180
atgtattttc	tacttagtca	gctctccctc	attgacctaa	attacatctc	caccattgtt	240
ccaaagatgg	tttatgattt	tctgtatgga	aacaagtcta	tctccttcac	tggatgtggg	300
attcagagtt	tcttcttctt	gacttttagca	gttgacagaag	ggctgtctct	gacatcaatg	360
gcctatgatc	gttatgtggc	catttgcttt	cctctccact	atcccatccg	tataagcaaa	420
agagtgtgtg	tgatgatgat	aacaggatct	tggatgataa	gctctatcaa	ctcttgtgct	480
cacacagtat	atgcactctg	tatcccatat	tgcaagtcca	gagccatcaa	tcattttttc	540
tgtgagggat	cctctgagag	gtacctggga	gcattgcaagc	ttggcgctgg	gccgcggtgg	600
aaacggcggtg	actggtaaaa	ccctgggctg	gccca			635

<210> 562
 <211> 789
 <212> DNA
 <213> Unknown (H38g411 nucleotide)

<220>
 <223> Synthetic construct

<400> 562
 atgttgggga attactctag cgccactgaa tttttctctt taggcttccc tggctdcca 60
 gaagtatgcc gtatcctatt tgcgaccttc ttctcttgt atgcagtgc agtgatggga 120
 aacgtgggtca tcatcatcac tgtctgtgt gataaatgct tgcagtcctc catttatatt 180
 ttcttggggc acctctgtgt cctggagatc ctgatcacat ccaccgctgt cccttttatg 240
 ctctgggggt tgctgcttcc aagcaccag atcatgtctt tgacagcctg tgctgcacag 300
 ctatatattt acctttcttt gggtaccttg gagttggcat taatgggagt gatggctgtg 360
 gaccgttatg tggctgtgtg taaccctttg aggtacaaca tcattatgaa cagcagcacc 420
 ttcatattgg tgataattgt gtcattgggt ttggggtttc ttcttgaaat ctggccagtt 480
 tatgccactt ttcagcttac ttctgcaaaa tcaagtgtgt tagatcattt ttattgtgac 540
 cgaggacaat tgctcaagg atcctgtgag gacactcttt tcagagagtt tattcttttt 600
 ctaatggctg ttttcattat cattggttct ttgatcccta cgattgtctc ctacacctac 660
 atcatctcca ccaacctcaa gattccgtca gcctctggct ggaggaaatc cttttccacc 720
 tgtgcctccc acttcaccta tgttgtgatt ggctatggca gctgcttgtt tctctacgtg 780
 aaaccaag 789

<210> 563
 <211> 951
 <212> DNA
 <213> Unknown (H38g412 nucleotide)

<220>
 <223> Synthetic construct

<400> 563
 atggatcaat acaaccattc aagcctggct gaatttgtgt tccttggctt tgccagtgtg 60
 ggctatgtca ggggctggct ttttgtcctg ctgctattgg catacctgtt caccatctgt 120
 ggtaacatgc tcatcttctc agtcatecga ctggatgcag ctctgcacac acctatgtac 180
 cactttgtca gtgttctttc cttcttggag ttgtgggtata cagctaccac tatccctaag 240
 atgttgtcta atattctcag tgagaagaaa accatttctt ttgcaggatg cctccttcag 300
 acctacttct tccactcctt gggagcgtct gaatgctacc ttcttacagc catggcctat 360
 gatagatacc tggccatttg tcggcccttc cactacccta taattatgac caccacactc 420
 tgtgccaaga tggctgctgc ttgttggact tgtggcttcc tgtgtcccat ttctgaggtc 480
 atccttgcct cccagctccc attttgtgt tacaatgaaa tccaacacat ttctgtgac 540
 ttccacctt tgetgagctt ggctgcaag gacacatctg ctaacattct ggtggacttt 600
 gccattaatg ctttcataat tcttatcact ttcttctta tcatgatttc ttatgcaagg 660
 atcattgggg ctgtgctgaa gataaaaaa gcatcaggaa gaaagaaggc cttttctacc 720
 tgtgcctcac atcttgtgtt ggtcctcatc ttctttggga gcatcatctt catgtatgtg 780
 cggctaaaga agagctatc cctgacctt gaccgaacac ttgctatagt ttactccgta 840
 ctaacaccaa tggatcaatc aattatctac agtcttcgta acaaggaaat cattaaagct 900
 atcaagagga ccattctcca gaaggagat aaagctagtc ttgtcatct t 951

<210> 564
 <211> 945
 <212> DNA
 <213> Unknown (H38g413 nucleotide)

<220>
 <223> Synthetic construct

<400> 564
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ccccacctcc	agctgatgct	cttcctgctg	ttcctgctga	tgtacctgtt	cacgctgctg	120
ggcaacctgc	tcatcatggc	cactgtctgg	agcgagcgca	gcctccacat	gcccattgtac	180
ctcttctctg	gtgcccctct	catcaccgag	atcctctaca	ccgtggccat	catcccgcgc	240
atgctggccg	acctgctgtc	caccagcgc	tccatgcct	tcctggcctg	tgccagtcag	300
atgttcttct	ccttcagctt	cggcttcacc	cactccttcc	tgctcactgt	catggggtac	360
gaccgctacg	tggccatctg	ccacccccctg	cgttacaacg	tgctcatgag	cctgcggggc	420
tgcacctgcc	gggtgggctg	ctcctgggct	gggtggcttg	tcattggggat	gggtgggtgacc	480
tcggccattt	tccacctcgc	cttctgtgga	cacaaggaga	tccaccattt	cttctgccac	540
gtgccacctc	tgttgaagtt	ggcctgtgga	gatgatgtgc	tggtgggtggc	caaaggcgctg	600
ggcttgggtg	gtatcacggc	cctgctgggc	tgttttctcc	tcactcctct	ctcctatgcc	660
ttcatcgtgg	ccgccattct	gaagatccct	tctgctgaag	gtcgggaacaa	ggccttctcc	720
acctgtgcct	ctcacctcac	tgtggtggtc	gtgcactatg	gctttgcctc	cgctatttac	780
ctgaagccca	aagggtccca	gtctccggaa	ggagacacct	tgatgggcat	cacctacacg	840
gtcctcacac	ccttctctcag	ccccatcatc	ttcagcctca	ggaacaagga	gctgaaggctc	900
gccatgaaga	agacttgctt	caccaaactc	ttccacaga	actgc		945

<210> 565

<211> 958

<212> DNA

<213> Unknown (H38g414 nucleotide)

<220>

<223> Synthetic construct

<400> 565

cacacagagc	cacggcatct	cacaggtgtc	tgagaattcc	tcctcctggg	actctcagag	60
gatccagaac	tgcagcctgt	cctcgtctgg	ctgtccccat	ccatgtatct	ggtcacagtg	120
ctgaggaacc	tgtcgtcat	cctggctgtc	agctctgact	cccacctcca	cacccccatg	180
tactttcttc	tctccaaccc	gtgctgggct	gacatcgggt	tcacttcggc	cacgggtccc	240
aagatgactg	tggacatgca	gtcacatatc	agagtcactc	cttatgagag	ctgcctgaca	300
cggatgtctt	tcttggtcct	ttttgcatgt	atagaagaca	tgctcctgac	tgtgatggcc	360
taggactgct	ttgtagccat	ctgtcgccct	ctgcactacg	cagtcactcg	gaatcctcac	420
ctctgtgtct	tcttagtttt	gggtgccttt	ttccttagcc	tggtggattc	ccagctgcac	480
agttagattg	ttacaattca	ccttcttcaa	gaatgtggaa	atctctcatt	ttgtctgtga	540
gccatctcaa	cttctcaacc	ttgcctgttc	tgacagcgtc	atcaatagca	tattcatgta	600
tttcaatagt	actatgtttg	gttttcttcc	catttcaggg	atccttttgt	cttactataa	660
aattgttccc	tccattctaa	ggatttcatc	gtcagatggg	aagtataaag	ccttctccac	720
ctgtggctct	cacctggcag	ttgtttgctt	attttatgga	acaggcattg	gcattgtacct	780
gacttcagct	gtggcaccac	ccccaggaa	tggtgtgggt	gcgtcagtga	tgtacgctgt	840
ggtcaccccc	atgctgaacc	ctttcatcta	cagcctgaga	aacagggaca	ttcaaagcgc	900
cctgtggagg	ctgcgcagca	gaacagtcga	atctcatgat	ctgttccatc	ctttttct	958

<210> 566

<211> 470

<212> DNA

<213> Unknown (H38g415 nucleotide)

<220>

<223> Synthetic construct

<400> 566

gtctccccac	tgtgggaatg	tgtgtcatga	cagcgggtctc	cccacttctt	atgctctgga	60
gactcagttt	tctgtctggt	tcacagtgtg	ggctgtctga	cactacttct	ttcacagagt	120
ttgcgggttc	tttcagtttt	cctgtttaagt	tctgtgctg	cttcttggaa	aaaagtcac	180
agcatgaatc	tctacacacc	attttgtctt	tctaagtggt	agaatcacgt	taacaatgcc	240
ttcaacctgc	catcatggaa	aaaaagtaaa	agtgtggtca	ccatgttcta	agggccccgc	300
atgatcacgt	acttgaggct	tgactcctag	tataacctac	agtgggaaaa	cagttggtgc	360
tgttctacag	cattgtctct	gccttcataa	aacctcatcat	ctccagcctc	aggaacaagg	420
atgtaaaagg	ggcttcttgg	aaagtactta	gagtcaaagg	gacagctcaa		470

<210> 567

<211> 862
 <212> DNA
 <213> Unknown (H38g416 nucleotide)

<220>
 <223> Synthetic construct

<400> 567
 atggaaaatt acaatcaaac atcaactgat ttcatcttat tggggctggt tccaccatca 60
 agaattgacc ttttcttctt cattctcttt gttctcattt tcctgatggc tctaattgga 120
 aacctatcca tgattcttct catctttcttg gacacccatc tccacacacc catgtatttc 180
 ctgcttagtc agctctccct cattgacctt aattacatct ctacgattgt tcctaagatg 240
 gcttctgatt ttctgtatgg aaacaagtct atctccttca ttgggtgtgg gattcagagt 300
 ttcttcttca tgacttttgc aggtgcagaa gcgctgctcc tgacatcaat ggcttatgat 360
 cgttatgtgg ccatttgctt tcctctccac tatcccatcc gtatgagcaa aagaatgtat 420
 gtgctgatga taacaggatc ttggatgata ggctccatca actcttgtgc tcacacagta 480
 tatgcattcc gtatcccata ttgcaagtcc agagccatca atcatttttt ctgtgatgtt 540
 ccagctatgt tgacattagc ctgtacagac acctgggtct atgagtacac agtgtttttg 600
 agcagcacca tctttcttgt gtttcccttc actggcattg cgtgttccta tggctggggt 660
 ctcttggctg tctaccgcat gcaactctgca gaaggaggaa aaaggcctat tcgacctgca 720
 gcacccacct cactgtagta actttctact atgcaccctt acgttatacc tatctatgtc 780
 caagatccct gtttatttct gacagaggac aaggttgggg ggggggggggt acaccatcct 840
 cacctcaatg ctcaacccca tc 862

<210> 568
 <211> 930
 <212> DNA
 <213> Unknown (H38g417 nucleotide)

<220>
 <223> Synthetic construct

<400> 568
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 cctcagatgg agatcatctt ctctgtgggc ttctcatag ttacctgggt taatgtagtg 120
 gggaatatgg gtatgattat cctgattaca acagacactc agcttcacac acctatgtat 180
 tttttctctt gcaacctctc ctttgttgac ctgggctact cctcagccat tgccccagg 240
 atgctggctg acttcctaac aaatcacaaa gttatctcct tctccagctg tgccaccag 300
 ttgtgttttt ttgtagggtt tgtggatgct gagtgctatg tcctggcagc catggcctat 360
 ggtcgttttg tggccatttg tcgacccctc cactatagca ccttcatgtc caagcaggtc 420
 tgcttggtc tcatgctggg ctcttacctg gctgggtctag tgagtttagt agccacact 480
 acctcacct tcagcctgag ttactgtggg tccaatatca tcaatcattt cttctgcgaa 540
 atcccaccac tcttggccct ctcttgctca gacacctaca tcagtgaagt cttgctcttc 600
 agtctgtgtg gcttcattga attcagcacc atcctcatca tcttcatctc ctataccttt 660
 atccttgttg caatcatcag aatgcgttca gctgaaggcc gccttaaggc tttctccacc 720
 tgcggtctc accttactgg catcacctc ttctatggca cagtcatgtt tatgtacctg 780
 aggccaacat ccagctactc cctggaccaa gacaagtggg cctctgtgtt ctacacggtt 840
 atcatcccca tgttaaatcc cttgatctac agtttgcgga acaaggatgt gaaagctgct 900
 ttcaaaaagc taattggaaa aaaatctcaa 930

<210> 569
 <211> 1005
 <212> DNA
 <213> Unknown (H38g418 nucleotide)

<220>
 <223> Synthetic construct

<400> 569
 tctacagacc cacagaatct aatagatgtc tctatatctc tcctcctaga acctcagagg 60
 atccagaacg gcagctgggc cttgctgggc tgttctgtc catgtgctg gtcacgggtg 120

tggggaacct	gctcatcatc	ctggccgtca	gtcctgactc	ccacctccac	acccccatgt	180
acttcttctc	ctccaacctc	tccttgccctg	acatcggttt	cacctccacc	acggccccca	240
agatgattgt	ggacatccga	tctcacagca	gagtcattct	ctatgcaggc	tgccctgactc	300
agacgtctct	ctttgccatt	tttgaggca	tggaagagag	acatgctcct	gagtgatgatg	360
gcctatgacc	agttttagtc	catctgtcac	cctctatata	attcagccgt	catgaacct	420
tgtttctgtg	gctttctagt	tttggtgact	tttttttttc	tcagtctttt	agacgcccag	480
ctgcacaact	tgattgcctt	acaaatgacc	tgcttcaagg	atgtggaaat	tcctaatttc	540
ttctgtgacc	cttctccact	cccccatctt	gcatgttgtg	acaccttcac	caataacata	600
atcatgtatt	tccctgctgc	catatttgg	tttcttccca	tctcggggac	ccttttctct	660
tactataaaa	ttgtttcctc	cattctgagg	gtttcatcat	cagggtggga	gtataaggcc	720
ttctccacct	gtgggtctca	cctgtcgggt	gtttgctgat	tttatggaac	aggcattgga	780
gggtacctca	gttcagatgt	gtcatcttcc	ccgagaaagg	ctgcggtggc	ctcagtgatg	840
tacacggtgg	tcacccccat	gctgaacccc	ttcatctaca	gcctgagaaa	cagggatatt	900
aaaagtgtcc	tgcggtggct	gcacggcagc	tctgtcta	ctcaacatct	tcttatctgt	960
tgcattcctt	ttgtagtgtg	ggttaaaaaa	ggcagcaggg	tcaaa		1005

<210> 570

<211> 907

<212> DNA

<213> Unknown (H38g419 nucleotide)

<220>

<223> Synthetic construct

<400> 570

atggatcacg	tcagtcataa	ctggactcag	agttttatcc	ttgctgggtt	caccaccact	60
gggaccctac	aacctcttgc	cttcttgggg	accctatgca	tctatctcct	cacacttgca	120
gggaacattc	tcattcattgt	cctggtacag	ttagattctg	gactgttcac	gccccatgtac	180
ttatttatca	gtgtcctctc	ctttgtagag	gtgtggtatg	tcagcaccac	agtgtcccatg	240
ctgctgcaca	ccttgctcca	aggggtgttca	cccgctctcat	cagctgtatg	ctttattcag	300
ctatgtcttt	cattccttag	ggatgactga	gtgctacctg	ctgggtgtca	tgggactgga	360
tagtaccctt	atcatctgcc	accactcca	ctaccacgca	ctcatgagca	gacaggtaca	420
gttagcacta	gttggggcca	gttgggtggc	tggcttctca	gctgcacttg	tgccagccac	480
cctcactgcc	actctgccct	tctgcttgaa	agagggtggcc	cattactttt	gtgacttggc	540
accactaatg	cgggtggcat	gtgtggacac	aagctggcat	gctagggccc	atggcacagt	600
gattggtgtg	gccactggtt	gcaactttgt	gctcattttg	ggactctatg	gaggtatcct	660
gaatgctgtg	ctgaagctac	cctcagctgc	cagtagtgcc	aaggccttct	ctacctgttc	720
ctcccacgta	actgtggtgg	cactattcta	tgcttctgcc	ttcacagtat	atgtgggctc	780
acctgggagt	cgacctgaga	gcacagacaa	gcttggtgcc	ttggtttatg	cccttattac	840
ccctttcctc	aatcctatca	tctatagcct	tcgcaacaag	gaggtgaaga	aggctttaag	900
gagagtc						907

<210> 571

<211> 1006

<212> DNA

<213> Unknown (H38g420 nucleotide)

<220>

<223> Synthetic construct

<400> 571

ccaacgaaga	gagagaacca	cacagtgata	agggagtgtt	ttttccagg	tttctccagc	60
tttcatgaac	acaagcttac	cctctttgtg	gtatttctta	ccttgtgtct	tttaacctg	120
gctggcaatg	tcataattgt	gacaattatc	agcattgatc	gtcaccttca	cacccccatg	180
tacttctttg	ttagtatgct	ttccacttca	gagactgtct	acacattagt	cattgtacca	240
cggatgctct	ccagtctctt	aagtctaagc	caacctatct	ctttgggtgg	ctgtgccacc	300
cagatgtttt	ttttattacc	ttggccatca	acaactgctt	tctgctcaca	gcaatgggg	360
atgatcgcta	tgtggccatc	tgtaacctt	tgaggtagat	gatcatcatg	aacaagaaag	420
tgtgtgtcca	gctggatgtg	gggtcctgca	gtgttgggct	gcttgtggcc	atagttcaga	480
tttcatctgt	gttcaggctg	cctttttgtg	ataaacagg	ggccattat	ttctgtgata	540
tccaccagtc	tatgaaactt	tcctgtgttg	ataccactct	acatgacctc	attaattttg	600

ttgttagttc	cctggttatt	gtggtgccgc	tgggtttggt	cttcatctcc	tacatcctca	660
tcattctctac	catcctcaag	gtcacctctc	ctgagggccg	gaaaaaggct	tttgcaactt	720
gtgcctccca	cctcactgtg	gttatcatcc	actatggctg	tgccctccatt	gcctacctca	780
agcccaagtc	agagaacacc	agggatcagg	accagcta	ttcagtgaca	tacaccgtct	840
ttactccact	acttaatcct	gttgtgtaca	ctttgaggaa	caaggaggct	aagaatgccc	900
ttcaccgtgc	tattggcaaa	aaaccttttg	cctagaatct	tcattcagttt	gacatatagt	960
cagtcatagt	ctgggtatatt	ttttaagctc	gagaaaattg	aatcct		1006

<210> 572

<211> 945

<212> DNA

<213> Unknown (H38g421 nucleotide)

<220>

<223> Synthetic construct

<400> 572

atgtccataa	ccaaagcctg	gaacagctca	tcagtgacca	tgttcatcct	cctgggattc	60
acagaccatc	cagaactcca	ggccctcctc	tttgtgacct	tcttgggcat	ctatcttacc	120
accctggcct	ggaacctggc	cctcattttt	ctgatcagag	gtgacaccca	tctgcacaca	180
cccatgtact	tcttcctaag	caacttatct	ttcattgaca	tctgctactc	ttctgctgtg	240
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gctgctcagt	tttttttctt	tgtcggcatg	ggtctgtctg	agtgcctcct	cctgactgct	360
atggcatacg	accgatatgc	agccatctcc	agcccccttc	tctaccccaac	tatcatgacc	420
cagggcctct	gtacacgcat	ggtggttggg	gcatatgttg	gtggcttctt	gagctccctg	480
atccaggcca	gctccatatt	taggcttcac	ttttgcgga	ccaacatcat	caaccacttc	540
ttctgcgacc	tcccaccagt	cctggctctg	tcttgcctctg	acaccttctt	cagtcaagtg	600
gtgaatttcc	tcgtggtggt	cactgtcgga	ggaacatcgt	tcttccaact	ccttatctcc	660
tatggttaca	tagtgtctgc	ggtcctgaag	atcccttcag	cagagggccg	atggaaagcc	720
tgcaacacgt	gtgcctcgca	tctgatgggtg	gtgactctgc	tgtttgggac	agcccttttc	780
gtgtacttgc	gaccagctc	cagctacttg	ctaggcaggg	acaaggtggt	gtctgttttc	840
tattcattgg	tgatcccat	gctgaacctt	ctcatttaca	gtttgaggaa	caaagagatc	900
aaggatgccc	tgtggaaggt	gttggaaggg	aagaaagtgt	tttct		945

<210> 573

<211> 949

<212> DNA

<213> Unknown (H38g422 nucleotide)

<220>

<223> Synthetic construct

<400> 573

atgccttgaa	agatggagtc	aataaacaca	aacttcactg	tactgaatt	tgtgttctctg	60
gggtgtcct	ctgaaccaa	gatacagctt	attcttttta	ttatgttctt	gttctattta	120
tcaacggtgg	ctggaaatgt	tataatcatc	actattatct	agatggaacc	tctcctcaa	180
accccatgt	acttcttctt	cactaattta	tcctttctgg	acatttgcta	cacatccacc	240
aatgtcccc	aaatgctgtc	caacatggcg	gggaaaaaga	acaccatctc	attctccagc	300
tgcgctactc	agatgtactt	ctccctctcc	tttggaatga	ttgtgtcctc	cttgggtgtca	360
tggcttatga	cagatatgta	gccatttgct	atcctcttca	ttataccttc	attatggacc	420
aaaacacctg	cattcaactg	gcagttattt	cttgggtccg	tagcttctctg	agttccatgg	480
ttatcaatgt	tctcacgttg	agtttgccct	actgtgggcc	taatctctg	aatcactttt	540
tctgtgaggt	actttctgtc	ctgaggttgg	cttgaccaa	cacctattc	acagagctgg	600
ttgtttttat	cttcagtatc	atcattgtct	tcaccccttt	cctcctcatt	gttgtttctt	660
atgtccggat	ccttcaatct	gttctcagga	tgcggtcagc	ctctgggcgg	tatcaggcat	720
tatccacctg	tacctcccat	ttgacagtgg	taaccttatt	tatgggactg	ccatcttcat	780
ggacatgaga	ccacagtcga	ggtcctcctg	ggctggcggc	aagatcattg	cggttttcta	840
cacggtgggc	acacccatgc	ttaacccctt	gatttacagc	ctgaggaacc	aagatgtgaa	900
aggagctcga	aggagagcta	ttgcaaagca	gaggatgtga	cagctgtta		949

<210> 574

<211> 1022
 <212> DNA
 <213> Unknown (H38g423 nucleotide)

<220>
 <223> Synthetic construct

<400> 574

atgccaaagc	taaattccac	ttttgtgact	gagttcctct	ttgaagggtt	ctccagcttc	60
aggcggcagc	acaaacttgt	cttctttgtt	gtcttcctaa	ctttgtacct	gctgactctc	120
tctggcaatg	tgattatcat	gaccattatt	cgcctggacc	atcatcttca	caccéccatg	180
tacttcttcc	tgtgcatgct	atccatctct	gagacctgct	acactgtggc	catcattccc	240
catatgcttt	ctggtctctt	gaatcctcat	cagcccattg	ccacccaaag	ctgtgccact	300
cagctcttct	tctatctcac	ctttggcatc	aacaactgct	tcctgctcac	agtcatggga	360
tatgaccgct	atgtggccat	ctgcaacccc	ctaagggtatt	cagtcacatc	gggtaagagg	420
gcctgtatcc	aactggcctc	tggatcactg	gggattggcc	ttggcatggc	cattgtccaa	480
gtaacatctg	tgtttggcct	gccattctgt	gatgcctttg	tcattctcca	cttcttctgt	540
gatgtgagac	acctgctgaa	gctggcctgc	acagacacca	ctgtcaatga	gataatcaac	600
tttgttgtca	gcgtctgtgt	ccttgttcta	cctatgggccc	tggctcttat	ctcctatgtc	660
ctcatcatct	ccaccattct	taagattgcc	tcagctgaag	gtcagaagaa	ggcctttgccc	720
acctgcgcct	cccacctcac	agtggctcatc	atccactatg	gctgtgcctc	catcatctac	780
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catcactccc	ctactgaacc	ctgttgtgta	cagcctgaag	aacaaggagg	tcaaagatgc	900
tctgcacaga	gccgtggggc	aaaaaactct	gtctccttaa	tgaagagagg	ttgtgaaggc	960
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gt						1022

<210> 575
 <211> 938
 <212> DNA
 <213> Unknown (H38g424 nucleotide)

<220>
 <223> Synthetic construct

<400> 575

atggatattg	gcctgagtat	agccaatagc	tcagggtttc	aactgtctga	gttcattctg	60
atagggttcc	caggcattca	tgagtggcag	cactggctct	ccctgccctt	agctcttggt	120
gccaatctcc	tcatacata	caccattcaa	catgagacca	tgctacatga	acccatgtac	180
catttgctgg	gcataattag	agtgggtggc	attggcctgg	ccaccaccat	catgcccagg	240
atcctggcca	tcttctgggt	tgatgccaa	gccatcagcc	tccttgagtg	ttttgctcag	300
atctatgcca	tccactcttt	catgtgcatg	gagtcaggca	tcttctctctg	catggcagtg	360
gatagatata	tggccatttg	ttatcccctt	cagtacactt	ccatagttac	tgaagctttt	420
gtcatcaaag	ccacactgtc	agtagtgctc	aggaatggcc	tggtgaccat	cccagtgcca	480
gtattggctg	cccagcgaca	ctactgtctc	aggaatgaga	ttgatcagtg	cctctgctct	540
aacttggggg	tcacaagtct	ggcctgtgat	gacaccacta	ttaacagggt	ttaccagctg	600
gccttgggtc	gggttggtgt	tgggagtgac	atgggtctgg	tctttgcttc	ctattctttg	660
attattcact	cagtgtctgaa	gctgaactct	gctaaagcaa	catctaaggc	cctgaatacc	720
tgcagctccc	accttatact	cattctcttt	ttctacacag	ctattattgt	agtatctgtc	780
accacctggc	aggaagaagg	gtcccccgca	tcctgtttct	cctcaatgtg	ctgcatattg	840
tcacccctc	agcccttaac	cccatagtat	atgcccttag	gacctaggag	ctgagagcgg	900
gcttccagaa	gctgcttggt	ttgggcgagt	atgtgtcc			938

<210> 576
 <211> 945
 <212> DNA
 <213> Unknown (H38g425 nucleotide)

<220>
 <223> Synthetic construct

<400> 576

atgtttctccc	caaaccacac	catagtgaca	gaattcattc	tcttgggact	gacagacgac	60
ccagtgcctag	agaagatcct	gtttggggta	ttccttgcca	tctacctaat	cacactggca	120
ggcaacctgt	gcatgatcct	gctgatcagg	accaattccc	acctgcaaac	acccatgtat	180
ttcttccttg	gccacctctc	ctttgtagac	atttgctatt	cttccaatgt	tactccaaat	240
atgctgcaca	atttcctctc	agaacagaag	accatctcct	acgctggatg	cttcacacag	300
tgtcttctct	tcctgcacct	ggtgatcact	gagttttaca	tccttgcttc	aatggcattg	360
gacgcctatg	tagccatttg	cagccctttg	cattacagtt	ccaggatgtc	caagaacatc	420
tgtgtctgtc	tggtcactat	cccttacatg	tatgggttcc	ttagtgggtt	ctctcagtca	480
ctgctaacct	ttcacttata	cttctgtggc	tcccttgaaa	tcaatcattt	ctactgcgt	540
gacccctctc	ttatcatgct	ggcctgctct	gacaccgctg	tcaaaaagat	ggcaatgttt	600
gtagttgcag	gctttaatct	ctcaagctct	ctcttcatca	ttcttctgtc	ctatcttttc	660
atTTTTgcag	cgatcttcag	gatccgttct	gctgaaggca	ggcaciaaagc	cttttctacg	720
tgtgcttccc	acctgacaat	agtcactttg	ttttatggaa	ccctcttctg	catgtacgta	780
aggcctccat	cagagaagtc	tgtagaggag	tccaaaataa	ctgcagtctt	ttatactttt	840
ttgagcccaa	tgtgaaccc	attgatctat	agcctacgga	acacagatgt	aatccttgcc	900
atgcaacaaa	tgattagggg	aaaatccttt	cataaaattg	cagtt		945

<210> 577

<211> 771

<212> DNA

<213> Unknown (H38g426 nucleotide)

<220>

<223> Synthetic construct

<400> 577

atgtttctac	tgttggccat	cctggcagcc	acagacctgg	gcttagccac	atctatagcc	60
ccagggttgc	tggtgtgtct	gtggcttggg	ccccgatctg	tgccatatgc	tgtgtgcctg	120
gtccagatgt	tctttgtaca	tgcactgact	gccatggaat	cagggtgtgt	tttggccatg	180
gcctgtgtatc	gtgctgcggc	aataggcgct	ccactgcact	accctgtcct	ggtcacaaaa	240
gcctgtgtgg	gttatgcagc	cttggccctg	gcactgaaag	ctgtggctat	tgtgtacact	300
ttcccaactgc	tggtggcaaa	gtttgagcac	ttccaagcca	agaccatagg	ccatacctat	360
tgtgcacaca	tggcagtggt	agaactgggt	gtgggtaaca	cacaggccac	caacttatat	420
ggtctggcac	tttcaactggc	catctcaggt	atggatattc	tggttatcac	tggctcctat	480
ggactcattg	cccatgctgt	gctgcagcta	cctaccgggg	aggcccatgc	caaggccttt	540
ggtaacatgta	gttctcacat	ctgtgtcatt	ctggccttct	acatacctgg	tctcttctcc	600
tacctcgcac	accgcttttg	tcatcacact	gtcccaaagc	ctgtgcacat	ccttctctcc	660
aacatctact	tgtgtgtgcc	acctgccctc	aacccccctc	tctatggggc	cgcaccaaag	720
cagatcagag	accgactcct	ggaaaccttc	acattcagaa	aaagcccgtt	g	771

<210> 578

<211> 1074

<212> DNA

<213> Unknown (H38g427 nucleotide)

<220>

<223> Synthetic construct

<400> 578

gtgagcatga	gcttcttaat	aagaagtgtat	tcaacactac	acactccaat	gtgcttgttc	60
ctcagtcate	tctcctttgt	agatctctat	tatgccacca	atgccactcc	tccgatgctg	120
gttaactttt	tttttccaag	agaaaaaccg	tttcttttat	tggttgcttt	atccaatttc	180
accttttcat	tgcactgggtg	atcacagatt	atcatatgct	cacagtgtatg	gtgtatgacc	240
actacatggc	catctgcaag	cctttgttat	atggaagcaa	aatgtccagg	tgtgtctgcc	300
tctgtctcac	tgtgtctccc	tatatattatg	gctctgcaaa	tggtctggta	cagggtcatcc	360
tgtatgctttg	tctgttcttc	tgtgaaccca	atgagatcaa	ccactttttt	ttttttggag	420
aaaatgcatt	atatgcacat	ttaattccac	tataaatttt	tgaatggacg	gttggagagg	480
aagggagaaa	tacatattaa	cggagagaat	accaccaga	aagtatatac	aatgggagaa	540
aggaacctgt	tgatccaagt	ttccatattc	ttattatggc	atataagggtc	atgattattt	600
tctcagtatg	aagcatctcc	cagggtctgac	tctgatgtaa	aattggagat	caaccacttt	660

tattatgcag	aaccacccct	cttagtcctc	gcctgcttgg	atacttatgt	caaagaaact	720
gccatgttca	tgggtggtgg	ttccaacctc	atctgccctc	tcactatcat	ctttatttcc	780
tacactttca	tcttcacaga	cattctgcac	atctgcaactg	ctgagggaag	gtacaatgcc	840
ttctccacct	gcgggtccct	tgtgactgcc	gtcactgtct	ttcaaggaac	gctgtttcac	900
atgtgcctga	ggcccccttc	tgaggcatct	gtagaacagg	ggaaaattgt	agctgctttt	960
tatatctttg	tgagtctctac	gttaaaccaca	ttgatctacc	gtctgaggaa	taaaaatggt	1020
aaaagaacaa	taagggaagt	tatccaaaag	aaactgtttg	ctaagtaagg	taga	1074

<210> 579

<211> 937

<212> DNA

<213> Unknown (H38g428 nucleotide)

<220>

<223> Synthetic construct

<400> 579

atgtttggtg	ctaattctcac	caccttccat	cccactctat	tcattctcct	tggcatccca	60
ggactggagc	aataccacat	ctggctttcc	attcctttct	accttatgta	catcactgca	120
gtcttgggaa	atggagccct	catcctagtt	gtcctcagtg	aacacaccct	ccatgtcttc	180
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ttcattcatg	ttgcctttgt	ggctgagtca	ggaatcctgc	tggccatggc	atttgacagt	360
tatgtagcca	ttgtactcc	cttgagatac	actaccatct	taacttctat	ggtaaagtga	420
aaaatgaccc	tgacaatctg	gggacaaagc	attggggaca	tttttctctg	catatttctg	480
ctgaagaggc	tgccatactg	tcagaccaat	atcatccccc	actcatactg	tgagcacatt	540
gggggtggccc	aattggcctg	tgctgacata	actgtcaata	tctgggtatgg	cttttcagtg	600
ccaatggcat	cggtttttgg	agatgttgca	ttcattgggt	tttcctacac	tttgatcctc	660
caggctgtgt	ttagacttcc	ttcccaggag	tcccagcaca	aagctcttaa	cacctgtggt	720
tctacattgg	agttgttctc	ctcttcttca	tcccatcatt	ttttactttc	ctgaccacc	780
gctttggcaa	gaatatcccc	catcatgtcc	acatacttct	ggcaaatctc	tacttgcttg	840
ttcccccatg	cttaacccca	ttatctacgg	agagaagacc	aagcaaatca	gggacagtat	900
ggctcatatg	ttatctgtgg	tgggggaagtc	ttgagac			937

<210> 580

<211> 941

<212> DNA

<213> Unknown (H38g429 nucleotide)

<220>

<223> Synthetic construct

<400> 580

atgaagatga	agatagatcc	caaattgcaat	ggcacggagg	taactgaatt	tattctgttg	60
ggactgacta	gccagccaga	gctgcagcct	atgctctttg	tggatttcc	cctgatttac	120
ctcatcaccc	tgactgggaa	atttgggatg	attttcctaa	tcagattcac	tcctcagctc	180
caaaccacaca	tgtatttttt	ccttactcat	ttagcatgtg	tggatatttt	ttactccact	240
aatgtctctc	cacagagctt	gttaattttct	tatctgagaa	gaagaccatt	tcctacagctg	300
ggtgtctggc	ccagtgtttt	gtctttgtga	ctctgtcctc	tactgagtat	tacatgcttg	360
gtgccatggc	ctatgactgc	tacatggcaa	tctgcaatcc	cctacattac	agcagcaaaa	420
tgtccagagc	agtttgcate	tgccctgggtga	ctttccccta	cttctgggggt	tctatggtgg	480
gcacgatgca	agtaatactg	acctctcgtt	tgctcttttt	tggacceaac	accatcaacc	540
attcttactg	tactgaccca	ccccctctaa	tggtgacatc	ttctgacact	tacataaaac	600
aaactgcctt	gtttgtgtga	gcagggatta	acctcacagt	ttccctgctc	atcattctca	660
tctcctacat	tttcattttc	atcaccatta	tgaggatccg	ttccagtga	ggcgagctca	720
aagccttctc	cacctgtggc	tcccacctga	cagctgtcac	tatgttctat	gggtccctat	780
tctgcatgta	cctgagacca	acaaatgagc	tgtctgttga	gcaagggaaa	atggggagtgg	840
tgttttgtat	ttttgtgagt	cccatgctga	acccgtttat	ctaccgcctg	agaaacaagg	900
atgtgaaaca	ggccttgaaa	agagtgttta	tgagaaacct	t		941

<210> 581

<211> 958
 <212> DNA
 <213> Unknown (H38g430 nucleotide)

<220>
 <223> Synthetic construct

<400> 581

atgagtccttc	tattctgaga	ctaagatatg	agaaacttta	caccactgtc	tggattttatt	60
atcctgggat	tcacggatca	cccagaatta	cagtgtcttc	tttttgtgtt	gtttcttctc	120
atctatatgt	tcacggttgt	tggaaatctt	ggcatgattc	tattaatcaa	gattgactca	180
catctccata	ctccaatgta	ctttttcttc	agtaacttgt	gccttgttga	cttctgttat	240
tcttctgtca	ttgcccctaa	tatgctgata	aatttctggg	tggagaacct	agtcatttca	300
tttaaatgaat	gtgccactca	attcttcttt	tttggctcct	ttgctggcat	tgaggggttt	360
ctgttggctg	tcattggccta	tgactgttat	gtggccatct	gcaagcctct	gctttataca	420
gtcctgatgt	cacccaccc	cagtgccttc	ctggtgttag	ccacatatct	tttgggcttt	480
gtaaatgctg	ccattcacac	tggttccacc	ttccagctgt	cattctgcca	ctccaatata	540
attaactatt	ttttttgtga	tattccaccc	ctcctgaaac	tcttgttctg	atacacacat	600
caatgagggt	gtcatttttg	cctttgccag	ttttaatgaa	ttgagctgtc	tcctactgat	660
tcttgtttcc	tgtctctaca	tccttgcctg	catcttgaag	atccactctg	cagaagggag	720
gcacaaggcc	ttctccacct	gtgcttccca	cttggcggtg	gtcactatct	tctttgggac	780
aatcctgttc	atgtatctct	gcgtcccgag	tccagctact	caatggatca	agacaaagtg	840
gtgtctgtct	tacacagtag	tcattcccat	gttgaatcct	ttcatctata	gtttgagaaa	900
caaggaagtc	aaagcttctt	taagtaaaat	gtttaaaaaa	gtctcttata	tctctact	958

<210> 582
 <211> 897
 <212> DNA
 <213> Unknown (H38g431 nucleotide)

<220>
 <223> Synthetic construct

<400> 582

atgggattac	caggcattca	tgagtggcag	cactggctct	ccctgcccct	gactctgctc	60
tacctcttag	ctcttgggtg	caacctcttc	atcataatca	ccattcaaca	tgagaccgtg	120
ctacatgaac	ccatgtacca	tttgcctggc	atattagcag	tggtggacat	tgacctggcc	180
accaccatca	tgcccaagat	cctggccatc	ttctggtttg	atgccaaggc	cattagcctc	240
cccatgtgtt	ttgtctcagat	ctatgccatc	cactgcttct	tctgcataga	gtcaggcatc	300
tttctctgca	tggcagtaga	cagatacata	gccatctgtc	gccctcttca	gtacccctcc	360
atagtcacta	aagcttttgt	cttcaaagcc	acagggttca	tcattgctcag	gaatggcctg	420
ttgaccatcc	cagtgcctat	actggctgcc	cagagacact	actgttccag	gaatgaaatc	480
gagcactgcc	tctgtcttaa	cttgggggtt	atcagcctgg	cttgtgatga	catcactgtg	540
aacaaatttt	accaactgat	gctagcatgg	gtcttgggtg	ggagtgatat	ggctctggta	600
ttttcttctt	atgctgtaat	ccttcaactc	gtgctgaggc	tgaactcagc	agaagcaatg	660
tccaaggctc	tgagcacttg	tagctccac	ctcactctca	tcctcttcca	cacaggatc	720
attgtgctgt	ctgtcacaca	ccttgcagag	aaaaagattc	cccttattcc	tgtgttccct	780
aatgtgctgc	acaatgtcat	ccccctgca	ctcaaccccc	tggcctgtgc	actcaggatg	840
cacaaactca	gactgggctt	tcagagactg	cttggactgg	gtcaggacgt	gtccaag	897

<210> 583
 <211> 951
 <212> DNA
 <213> Unknown (H38g432 nucleotide)

<220>
 <223> Synthetic construct

<400> 583

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ctcttaggac	tttccgacaa	tccagatcta	caaggagtcc	tctttgcatt	gtttctgttg	120

atctatatgg	caaacatggt	gggcaatttg	gggatgattg	tattgattaa	gattgatctc	180
tgtctccaca	cccccatgta	tttctttctc	agtagcctct	cttttgtaga	tgcctcttac	240
tcttcttccg	tcactcccaa	gatgctgggt	aacctcatgg	ctgagaataa	ggccatttct	300
tttcatggat	gtgctgcccc	gttctacttc	tttggtcct	tcctggggac	tgagtgtctc	360
ctgttgccca	tgatggcata	tgaccgctat	gcagccattt	ggaaccccc	gctctacca	420
gttctcgtgt	ctgggagaat	ttgctttttg	ctaatagcta	cctccttctt	agcagggtgt	480
ggaaatgcag	ccatacatat	agggatgact	tttaggttgt	ccttttgtgg	ttctaataag	540
atcaaccatt	tctactgtga	caccccgcca	ctgctcaaac	tctcttgctc	tgatacccac	600
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gtcctcattt	cctacctgtg	tatcttcatt	gccgtcttga	agatgccttc	gttagagggc	720
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acaatcctct	tcattgtactt	gcgccttaca	tctagctact	caatggagca	agacaagggt	840
gtctctgtct	tttatacagt	aataatccct	gtgctaaatc	ccctcatcta	tagtttaaaa	900
aataaggatg	taaaaaaggc	cctaaagaag	atcttatgga	aacacatctt	g	951

<210> 584

<211> 951

<212> DNA

<213> Unknown (H38g433 nucleotide)

<220>

<223> Synthetic construct

<400> 584

atgagtcaca	ccaatgttac	catcttccat	cctgcagttt	ttgtccttcc	tggcatecct	60
gggttgagg	cttatcacat	ttggctgtca	atacctcttt	gcctcattta	catcactgca	120
gtcctgggaa	acagcatcct	gatagtgggt	attgtcatgg	aacgtaacct	tcatgtgccc	180
atgtatttct	tcctctcaat	gctggccgtc	atggacatcc	tgctgtctac	caccactgtg	240
cccaaggccc	tagccatctt	ttggcttcaa	gcacataaca	ttgcttttga	tgccctgtgtc	300
acccaaggct	tctttgtcca	tatgatgttt	gtgggggagt	cagctatcct	gttagccatg	360
gcctttgatc	gctttgtggc	catttgtgcc	ccactgagat	atacaacagt	gctaacatgg	420
cctgtttggg	ggaggattgc	tctggccgtc	atcacccgaa	gcttctgcat	catcttccca	480
gtcatattct	tgctgaagcg	gctgccttcc	tgccctaacca	acattgttcc	tcactcctac	540
tgtgagcata	ttggagtggc	tcgtttagcc	tgtgctgaca	tcactgttaa	catttgggat	600
ggcttctcag	tgcccatgtg	catggtcatc	ttggatgtta	tcctcatcgc	tgtgtcttac	660
tactgatcc	tccgagcagt	gtttcgtttg	ccctcccagg	atgctcggca	caaggccctc	720
agcacttgtg	gctcccacct	ctgtgtcatc	cttatgtttt	atgttccatc	cttctttacc	780
ttattgacct	atcattttgg	gcgtaatat	cctcaacatg	tccatatctt	gctggccaat	840
ctttatgtgg	cagtgccacc	aatgctgaac	ccatttgtct	atggtgtgaa	gactaagcag	900
atacgtgagg	gtgtagccca	ccggttcttt	gacatcaaga	cttggtgctg	t	951

<210> 585

<211> 915

<212> DNA

<213> Unknown (H38g434 nucleotide)

<220>

<223> Synthetic construct

<400> 585

atgcagagga	gcaatcatat	agtgactgag	tttatactgc	tgggcttcac	cacagaccca	60
ggaatgcagc	tgggcctctt	cgtgggtgtt	ctgggcgtgt	actctctcac	tgtggtagga	120
aatagcacc	tcactgtgtt	gatctgtaat	gactcctgcc	tccacacacc	catgtatttt	180
gtcgtctggaa	atctgtcgtt	tctggatctc	tggattctct	ctgtctacac	cccaaagatc	240
ctagtgcct	gcattctctga	agacaaaagc	atctcctttg	ctggctgcct	gtgtcagttc	300
ttcttctctg	cagggtctgg	ctatagttag	tgtacactgc	tggctgccgt	ggcttatgac	360
cgctacgtgg	ccatctccaa	gcccctgctt	tatgcccagg	ccatgtccat	aaagctgtgt	420
gcattgctgg	tagcagtctc	atattgtggg	ggctttatta	actcttcaat	catcaccaag	480
aaaacgtttt	cctttaactt	ctgccgtgaa	aacatcattg	atgacttttt	ctgtgatttg	540
cttcccttgg	tggagctggc	ctgtggcgag	aagggcggct	ataaaattat	gatgtacttc	600
ctgctggcct	ccaatgtcat	ctgccccgca	gtgctcatcc	tggcctccta	cctctttatc	660

atcaccagt	tcttgaggat	ctcctcctcc	aagggctacc	tcaaagcctt	ctccacatgc	720
tcctcccacc	tgacctctgt	cactttatac	tatggctcca	ttctctacat	ctacgctctc	780
cccagatcta	gctattcttt	tgatatggac	aaaatagttt	ctacatttta	cactgtggta	840
ttccccatgt	tgaatctcat	gatctacagc	ctaaggaata	aggatgtgaa	agaggctctg	900
aaaaaacttc	tccca					915

<210> 586

<211> 942

<212> DNA

<213> Unknown (H38g435 nucleotide)

<220>

<223> Synthetic construct

<400> 586

atgcttccct	ctaatatcac	ctcaacacat	ccagctgtct	ttttgttgg	aggaattcct	60
ggtttgaac	acctgcatgc	ctggatctcc	atccccctt	gctttgctta	tactctggcc	120
ctgctaggca	actgtacctt	tctcttcatt	atccgggctg	atgcagccct	ccatgaaccc	180
atgtacctct	ttctggccat	gttggcaacc	attgacttgg	ttctttcttc	tacaacgctg	240
cccaaaatgc	ttgccatatt	ctgggttcagg	gatcaggaga	tcaacttctt	tgctgtctg	300
gtccagatgt	tcttccttca	ctccttctcc	atcatggagt	cagcagtgtc	gctggccatg	360
gcctttgacc	gctatgtggc	catctgcaag	ccattgcact	acacgacgg	cctgactggg	420
tcctctcatc	ccaagattgg	catggctgtc	gtggcccg	ctgtgacact	aatgactcca	480
ctcccccttc	tgctcagacg	cttccactac	tgccgagcc	cagtgtattg	ccattgtctac	540
tgtgaacaca	tggtctgtgt	aaggctggcg	tgtggggaca	ctagcttcaa	caatatctat	600
ggcattgtctg	tggtccatgtt	tagtgtgtgt	ttggacctgc	tctttgttat	cctgtcttat	660
gtcttcatcc	ttcaggcagt	tctccagctt	gcctctcagg	aggcccgcta	caaggcattt	720
gggacatgtg	tgtctcacat	aggtgccatc	ctgtccacct	acactccagt	agtcactctc	780
tcagtcatgc	accgtgtagc	ccgccatgct	gcccctcgtg	tccacatact	ccttgctatt	840
ttctatctcc	ttttccacc	catggtcaat	cctatcatat	atggagtcaa	gaccaagcag	900
attcgtgagt	atgtgtctcag	tctattccag	agaaagaaca	tg		942

<210> 587

<211> 937

<212> DNA

<213> Unknown (H38g436 nucleotide)

<220>

<223> Synthetic construct

<400> 587

atgttaaaga	aaaaccatac	agccgtgact	gagtttgttc	tcctgggact	gacagatcgg	60
gctgagctgc	agtcccttct	ttttgtggta	tttctagtca	tctaccttat	cacagtaatc	120
ggcaatgtga	gcatgatctt	gttaatcaga	agtgactcga	cactacacac	tccaatgtac	180
ttcttctctc	gtcacctctc	ctttgtagat	ctctgttata	ccaccaatgt	tactcctcag	240
atgctgggta	actttttatc	caagagaaaa	accatttctc	tcactgggctg	ctttatccaa	300
tttcaactttt	tcattgcact	ggtgattaca	gattattata	tgctcacagt	gatggcttat	360
gaccgctaca	tggtccatctg	caagcccttg	ttatatggaa	gcaaaatgac	cagggtgtgtc	420
tgctctgtgc	tcgctgtctg	tccttatatt	tatggctttg	caaatggtct	aagcacagac	480
caccctgatg	cttcgtctgt	ccttctgtgg	acccaatgac	atcaaccact	tttactgtgc	540
ggaccacccc	ctcttagtcc	tcgctgtctc	agatacttat	gtcaaagaga	ccgccatgtt	600
ggtggtggct	ggttccaacc	tcatttgctc	tctcaccgtc	atcctcattt	cctacacttt	660
catcttcact	gccattctgc	gtatccacac	tgctgagggg	aggcgcaagg	ccttctccac	720
ctgctgggtct	catgtgaccg	ctgtcactgt	cttctatggg	acactgttct	gcatgtacct	780
gagggccctt	tctgagacat	ctatacaaca	ggggaaaatt	gtagctgttt	tttatatctt	840
tgtgagtccg	atgttaaacc	cattgatcta	cagcctgagg	aataaagacg	ttaaaagaag	900
tataaggaaa	gttattcaaa	agaaactggt	tgctaag			937

<210> 588

<211> 942

<212> DNA

<213> Unknown (H38g437 nucleotide)

<220>

<223> Synthetic construct

<400> 588

atgtcagcct	ccaatatcac	cttaacacat	ccaactgcct	tcttggtggt	ggggattcca	60
ggcctggaac	acctgcacat	ctggatctcc	atccctttct	gcttagcata	tacactggcc	120
ctgcttgga	actgcactct	ccttctcatc	atccaggctg	atgcagccct	ccatgaaccc	180
atgtacctct	ttctggccat	gttggcagcc	atcgacctgg	tcctttcctc	ctcagcactg	240
cccaaatgc	ttgccatatt	ctggttcagg	gatcgggaga	taaacttctt	tgctgtctg	300
gcccagatgt	tcttccttca	ctccttctcc	atcatggagt	cagcagtgtc	gctggccatg	360
gcctttgacc	gctatgtggc	tatctgcaag	ccactgcact	acaccaaggt	cctgactggg	420
tcctcatca	ccaagattgg	catggctgct	gtggcccggg	ctgtgacact	aatgactcca	480
ctccccttcc	tgctgagatg	ttccactac	tgccgaggcc	cagtgatcgc	tcactgctac	540
tgtgaacaca	tggctgtggt	gaggctggcg	tgtggggaca	ctagcttcaa	caatatctat	600
ggcatcgctg	tggccatggt	tattgtgggt	ttggacctgc	tccttggtat	cctgtcttat	660
atctttatc	ttcaggcagt	tctactgctt	gcctctcagg	aggcccgtca	caaggcattt	720
gggacatgtg	aggtgccat	aggtgccat	gtagccttct	acacaactgt	ggtcatctct	780
tcagtcatgc	accgtgtagc	ccgccatgct	gccccctatg	tccacatcct	ccttgccaat	840
ttctatctgc	tcttcccacc	catggtcaat	cccataatct	atggtgtcaa	gaccaagcaa	900
atccgtgaga	gcattctggg	agtattccca	agaaaggata	tg		942

<210> 589

<211> 936

<212> DNA

<213> Unknown (H38g438 nucleotide)

<220>

<223> Synthetic construct

<400> 589

atgtcagcct	ccagtatcac	ctcaacacat	ccaacttctt	tcttggtgat	ggggattcca	60
ggcctggagc	acctgcacat	ctggatctcc	atcccccttct	cagcatatac	actggccctg	120
cttggaaact	gcaccctcct	tctcatcatc	caggctgatg	cagccctcca	tgagcccata	180
tacctcttct	tggccatggt	ggcagccatc	gacctggtcc	tttctcctc	agcattgccc	240
aaaatgcttg	ccatattctg	gttcagggat	cgaggagatca	acttttttgc	ctgtctgggtc	300
cagatgttct	tccttcactc	cttctccatc	atggagtcag	cagtgtctgt	ggccatggcc	360
tttgaccgt	atgtggccat	ctgcaagcca	ctgcactaca	ccacggctct	gactgggtcc	420
ctcatcacca	agattggcat	ggctgctgtg	gcccgggctg	tgacactaat	gactccactc	480
cccttctctg	tgagatgttt	ccactactgc	cgaggcccag	tgattgcccg	ctgctactgt	540
gaacacatgg	ctgtgggtcag	gctggctgtg	ggaacactag	cttcaacaat	atctatggca	600
ttgtgtggc	catgtttatt	ggagtgttgg	atctattctt	tatcatccta	tcttatatct	660
ttatccttca	ggcagttcta	caactctcct	ctcaggaggc	ccgctacaaa	gcatttgga	720
catgtgtctc	tcacataggt	gccatcttag	ccttctacac	accttcagtc	atctcttcag	780
tcatgcaccg	tgtggcccgc	tgtgctgcgc	cacacgtcca	cattctcctc	gccaatttct	840
atctgctctt	cccacccatg	gtcaatccca	tcactacagg	cgtaagacc	aagcagatcc	900
gtgacagtct	tgggagtatt	cccagagaaag	gatgtg			936

<210> 590

<211> 955

<212> DNA

<213> Unknown (H38g439 nucleotide)

<220>

<223> Synthetic construct

<400> 590

atgacaaccc	acaactccac	tggtagcagc	cactcactct	tcattctgct	gagcattcct	60
ggcttagaag	accagcacac	atggatgtct	ctcccccttct	ttatttccta	ccttggtgct	120
ttccttgga	acagcctcat	catcttcatc	atcatcactg	aatgcagcct	ccacgaaccc	180

atgtacac	ttctctgc	atgtggtg	atgtacac	ttctgtct	taccactg	240
cccaaggc	tagccat	ttggttct	atgtgagc	tatccctg	tggtgtgt	300
acccaaat	tctttatc	tgctacc	atcgagga	caggaatt	gttgcgat	360
gcaattga	gctatgtg	catctgtg	ccactgca	ataccacag	gtcagtcg	420
gcaaaaat	caaagatt	cttggtgt	gtcctgag	gcttctgt	gatcatgc	480
gatgtgtt	tggtaaag	gctgcctt	tgccatag	atctgctg	acatacct	540
tgtgagca	tggtgtgt	caagtttg	tgtgtgta	ttcatgtc	tggttggt	600
ggcttgtc	tccttctc	tactgtag	ctagatgc	tgcttatc	agtgtcct	660
agcttcat	tgtataca	cttccac	ccctccca	ggagctcg	aaaaggct	720
gggcacat	ggctccac	tcagagtc	ttccatgt	tacttgct	gtattttt	780
cataatt	cagcggtt	ggcaccat	tccttcc	acacacat	tgctgggt	840
tgtctggg	ttggctcc	ccatgctg	ccccatc	tatgggat	acaccagg	900
gattcaag	tgtgtgct	gtcttttg	ctcacaga	aatgatgt	agatt	955

<210> 591

<211> 939

<212> DNA

<213> Unknown (H38g440 nucleotide)

<220>

<223> Synthetic construct

<400> 591

atgaattgg	taaatacag	catcatac	gagtttat	tgctgggt	ctcagatc	60
ccttggctg	agtttcc	ccttgtgg	ttcttgat	cttacctg	gaccatct	120
ggcaatctg	ccattatt	agtgtcac	ctggacac	aacttcac	ccccatgt	180
ttttttct	ccaatct	actcctgg	ctttgtta	ccacatgt	agtccaca	240
atgctagta	atttatgc	catcagga	gtaatcag	atcgtggc	tgtagccc	300
cttttcat	ttctggcc	gggggcta	gaatatct	tcctggcc	catgtcct	360
gataggtt	tagctatt	tcggcctc	cattactc	ttatcatg	ccagagac	420
tgctccag	tggcagtc	atcctggg	actggttt	gtaactca	gtggttgt	480
accctgac	tcagctgc	actctgtg	ccctatgt	tagatcact	tctctgtg	540
gtccctgc	tgctcaag	atcttgtg	gagacaac	caaatagg	tgaactat	600
cttgtcag	agctcttc	tctaatac	ctgacact	tccttata	atatgctt	660
attgtccg	cagtattg	gatacagt	gctgaagg	gacaaaaa	atttggga	720
tgtggttcc	atctaatt	ggtgtctc	ttttatag	cagccgtc	tgtgtacc	780
caaccac	cgcccagc	caaggacca	ggaaagat	tttctctc	ctatgga	840
attgcacca	tgctgaat	ccttatata	acacttag	acaaggag	aaaggagg	900
tttaaaagg	tggttgca	agtcttct	atcaagaa			939

<210> 592

<211> 997

<212> DNA

<213> Unknown (H38g441 nucleotide)

<220>

<223> Synthetic construct

<400> 592

atggaaaa	ccaatgtc	ctcagtgt	ggttttat	tggtgggt	ctctgatc	60
cccaagct	agatggtg	ctttacag	aattttat	tgtattc	ggctgtgt	120
ggaaattc	ccataatc	tgtgtgt	ttagactc	aacttcac	cccaatgt	180
ttctttct	caaatctt	ctttctag	ctctgttc	gtactagt	catccaca	240
atgctggt	acctctgg	ccctgaca	actattag	gtgctggc	tggtgtcc	300
cttttctc	tcctttct	caggggaa	gagtgcac	ttctggct	catggcct	360
gacagct	ctgcagtc	caaaccgt	cgctatct	tcattatg	cctccagc	420
tgtctagg	tgatggct	agcctggg	agtggact	tcaatgcc	tgcatgtc	480
ccactaaca	tgacctct	cagaagtg	cgccgcag	ttaaccat	cctctgtg	540
agccagca	gatcaagt	gcttggtt	atgttcgt	agtggaa	ctggcttt	600
cttttgcc	tctcattg	ctactgcc	tcactctt	tcttgtct	tacggcta	660
ttgctgc	tggtcta	atcaagtc	ctgccagg	atggaggc	ttccatac	720

gtagctctca cctcacagt gtctccctgt tttatgggag catcatctat atgtatatgc	780
agccaggaaa cagttcttcc caagaccaag gcaagtttct cactctcttc tacaacctgg	840
tgactcctat gttgaatctg ctcatctata ctttaaggaa taaggagggtg aaaggagcac	900
tgaagaaggt tttggggagg caataatgaa ctggagaaat atgataagtt gtgaagtctt	960
aggcaaaata tcttttccaa atacatttat tttgtgc	997

<210> 593

<211> 950

<212> DNA

<213> Unknown (H38g442 nucleotide)

<220>

<223> Synthetic construct

<400> 593

caagtagttc atacaggctt ttctccctag ctatacgtct tcaccctgct gggaaatggg	60
gcacccctggg gctcatctgg ctggactcca gactgcacac ccccatgtac ttctttctct	120
cacacctggc catcattgat atttcgtatg cttccaacaa tgtccccaag atgctgacaa	180
accttggtct gaacaagaga aaaacaatct cctttgtccc atgcacaatg cagacctttt	240
tatacatggc ttttgctcac actgagtgtc tcactcttgg aatgatgtcc tacgatcggt	300
acatggctgt ctgccacct ctgcaatatt ctgtcatcat gagatgggga gtgtgcacag	360
tcctggctgt cacttcttgg gcatgtggtt ccttctggcc ctggtccatg tggttctcat	420
cctgaggctg cccttctgtg ggccccatga aatcaaccac ttcttctgtg aaatcctgtc	480
tgtcctcaag ttggcctgtg ctgacacctg gctcaaccag gtggtcatct ttgcttcttc	540
agtgttcate ctggtggggg cgctctgcct ggtgctggtc tcctactcgc gcacccctggc	600
ggccatcttg aggaatcagt ctggggaggg gcgcagaaag ggcttctcca cctgctatc	660
ccacctttgc atggtgggac tcttcttttg cagcgccatt gtcacgtaca tggcccccaa	720
gtcccgccat cctgaggagc agcagaaaag tctttccctg ttttacagcc ttttcaatcc	780
aatgctgaac ccccctgata tatagcctaa ggaatgcaga ggtcaagggc gccctgagga	840
gtgcactgag gaaggagagg ctgacgtgag acatctcaaa ggggaacctg gggagggagc	900
cttgctccct gcaaaatata gaagttggct tttttttttg tcttctgcta	950

<210> 594

<211> 711

<212> DNA

<213> Unknown (H38g443 nucleotide)

<220>

<223> Synthetic construct

<400> 594

cagatgctga cagattggtg gggacctaat aggaccacaa gttacgtgaa ctcaccattc	60
aattccttgt ctctctgtag ttatgtgccca ctatataatt tctacaatta ttttataatt	120
atatgccatc ctttgtaata tttgttaatc atgaacctat atctcctcct taatcttact	180
ttaatacttg agtgataatt cattcatttt tgtcatcatg tatactctca tcctaaaatt	240
cccaagggtat gaaaaaaaaa aaccttcagg ataattccct ccattgtgtg ctagctatgc	300
tgaaaacagt ttttctagat gctacaattg aagaaatgtc tgtatttgtg ttaatacaat	360
gtaaatgtcc taatatgcct tatcagtaat tttacctgct atggctacat tgagggtgcac	420
taagaatgaa tactagtaat taaattagaa gcaagctgag aaatcagtat catcatcatc	480
atcatagggtg tcatttcatt atagattcaa tcttctatgg aatcattgtg taaatgctct	540
tgaagatggt aacaactcct cccaagacca agaaatgatt ctttatcttg ttttacacta	600
tactaactcc aagtctcaaa cttctagttt atctgttaag aataaagata taaaggatat	660
ttcaaggaga atactaagat tggcagggaa tcttcaaaaa tgaaaggaaa c	711

<210> 595

<211> 765

<212> DNA

<213> Unknown (H38g444 nucleotide)

<220>

<223> Synthetic construct

<400> 595

atgtatttcc	tactgagtea	gctctccctc	attgacctaa	attacatctc	caccattgtt	60
cctaagatgg	catctgattt	tctgcatgga	aacaagtcta	tctccttcac	tgggtgtggg	120
attcatagtt	tcttcttcac	gacttttagcc	gttgtagaag	cgctactcct	gatataaatg	180
gcctatgttc	gttgcatgtc	tatttgcttt	cctctccact	atctcatgcg	catgagcaaa	240
agagtgtgtg	tgctgatgat	aacaggatct	tggatcatag	gctcgatcaa	tgcttgtgct	300
cacactgtat	atatactcca	tattccttat	tgcccatcta	gggttatcaa	tcatttcttc	360
tgtgatgtcc	cagcaatggg	gactctggcc	tgcattggaca	cctgggtcta	tgagggcaca	420
gtgcttttga	gcgccaccat	ctttctcgtg	tttcccttca	ttgctatttc	atgttccctat	480
ggacgggttc	tccttgctgt	ctaccacatg	aaatctgcag	aagggaagaa	gaaggccctac	540
ctgacctgca	gcaccacact	cactgtagtg	actttctact	atgcaccctt	tgcttacacc	600
tatctacgcc	caagatccct	gcgatctccg	acagaggaca	aggttctggc	tgtcttctac	660
accatcctca	ctccaatgct	caaccccatc	atctacagcc	tgagaaacaa	ggaggtgatg	720
ggggccctga	cagagtgat	tcagaaaatc	ttttcagtga	aaata		765

<210> 596

<211> 960

<212> DNA

<213> Unknown (H38g445 nucleotide)

<220>

<223> Synthetic construct

<400> 596

ctgtcatgac	caaccagagc	tgcccagaaa	cagttcatct	tactgggttt	ctcaggcaga	60
cccaggctgg	agcatgtcct	ctttgtgttt	gtcctcatct	tctaccttgt	gaccttagtg	120
ggcaacatca	tcattatctt	gatctccac	ctggaccct	gcctccacat	gccatgtac	180
ttcttctca	ctaactgtc	tttctagat	ctctgcttca	ccaccagttc	tatccccag	240
ctgcttttca	atctaggcag	cccaggcaag	actatcagcc	acacgggctg	tgccatccag	300
ctcttcatgt	tcctgggcct	gggtggcaag	agtgtattct	cttggcagcc	gtggcctatg	360
accgcttcat	tgcaatctgc	aagcccttc	actattctgt	cattatgcac	cctcagctgt	420
gctggaagtt	ggtgtctgtg	gcccgggggt	gttgactcc	tcagttctct	agttatgtct	480
cctgtgacta	tgaagctgcc	acgatgtgga	agatgtaagt	tgaaacattt	cctgtgtgag	540
atgccagctc	taataaaaaat	cacctgtgtg	gacacagtgg	ctatggagag	cactgttttc	600
accttatcgg	tagtaattgt	cctgatgcct	ttgtgtctta	tcctcatctc	ttatagctac	660
attgccctag	cagtgtctgag	aatcaagtc	gccgcaggaa	gaagggaaggc	cttcaatatg	720
tgccgggtccc	acctcaccgt	ggtctccttg	ttttatggga	atattatcta	tatgtatatg	780
caaccatgaa	ataattcttc	tcaggaccaa	gggaagtctc	ttaccctttt	ctacaactta	840
atgaccccca	tgtaaacc	tgctcatctat	acactgagaa	acaaggatgt	aaaagggtgca	900
ctgaagaggc	ttgtgtctag	aaaacacagt	gacagtgcact	gctcttgaga	ctgcttcttt	960

<210> 597

<211> 377

<212> DNA

<213> Unknown (H38g446 nucleotide)

<220>

<223> Synthetic construct

<400> 597

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aaaattggcc	atttcatctt	cattctcatt	aatttcgttt	tcctaattggc	tctaattgga	120
aacctatcca	tgattcttct	catcttcttg	gacatccatc	tcacacaccc	catgtatttc	180
ctacttagtc	agctctccct	cattgacct	aatttatatt	ccaccattgt	tcctaagatg	240
gtttatgatt	tttcatgtat	ggaaacaagt	ctatctcctt	cactgggtgt	gggattcaga	300
gtttcttctt	cctgacttta	gcagggtgcag	aagcgtctgt	cctgacatca	atggcctatg	360
atcgttatgt	ggctatt					377

<210> 598

<211> 979

<212> DNA

<213> Unknown (H38g447 nucleotide)

<220>

<223> Synthetic construct

<400> 598

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ggcaatggca	ccattatact	tttatccatt	gtagatcctc	gcctccatac	ccctatgtat	180
ttcttccctc	ccaatctctc	ttttatggat	ctttgtttga	ccacttgtag	tgtccctcag	240
acactggtea	actttaaggg	gaaggacaag	accatcacct	atgggtggctg	cgtagcccag	300
ctattcattg	ccttgggact	cggggggagt	ggagtgtgtc	ttattgtctg	ccatggccta	360
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agttccagtg	atgctgaaac	tgctctgcac	caacacctcc	atcaacgagg	ctgaaatctt	600
tgcttcagtg	gtcttctctt	tggtgggtgcc	tctctcactc	atcttagcat	cctatggtea	660
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aactaagaag	actagtgggg	aggaccatag	atgcatgaga	aagttaacgc	agggtttgca	960
gttccaaaca	tttgtgcac					979

<210> 599

<211> 936

<212> DNA

<213> Unknown (H38g448 nucleotide)

<220>

<223> Synthetic construct

<400> 599

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ataattgacc	ttttcttctt	cattctcatt	gttttcattt	tcctgatggc	tctaattgga	120
aacctgtcca	tgattcttct	catcttcttg	gacaccatc	tccacacacc	catgtatttc	180
ctactgagtc	agctctccct	cattgacctc	aattacatct	ccaccattgt	tcctaagatg	240
gcactctgatt	ttctgcatgg	aaacaagtct	atctccttca	ctgggtgtgg	gattcagagt	300
ttcttcttct	tggcattagg	aggtgcagaa	gcactacttt	tggcatctat	ggcctatgat	360
cgttacattg	ctatttgctt	tcctctccac	tatctcatcc	gcatgagcaa	aagagtgtgt	420
gtgctgatga	taacagggtc	ttggatcata	ggctcgatca	atgcttgtgc	tcacactgta	480
tatgtactcc	atattcctta	ttgccgatcc	agggccatca	atcatttctt	ctgtgatgtc	540
ccagcaatgg	tgactctggc	ctgcatggac	acctgggtct	atgagggcac	agtgtttttg	600
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ctctttgctg	tctaccacat	gaaatctgca	gaaggaggga	agaaagccta	tttgacctgc	720
agcaccaccc	tcactgtagt	aactttctac	tatgcacctt	ttgtctacac	ttatctacgt	780
ccaagatccc	tgcatctctc	aacagaggac	aaggttctgg	ctgtcttcta	caccatcctc	840
accccaatgc	tcaaccccat	catctatagc	ctgaggaaca	aggaggtgat	ggggggccctg	900
acacgagtga	gtcagagaat	ctgctctgtg	aaaatg			936

<210> 600

<211> 936

<212> DNA

<213> Unknown (H38g449 nucleotide)

<220>

<223> Synthetic construct

<400> 600

atgcccatt	caaccaccgt	gatggaattt	ctctcatga	ggttttctga	tgtgtggaca	60
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atcctcattg tgaccgtcac cactgtgtac agcagccttc acatgcccac gtacttcttc 180
ctcaggaatc tgtctatctt ggatgcctgc tacatttctg ttacagtccc tacctcatgt 240
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cagatgacac tggcctccct actcagtggt cttgtctatg caggcatgca cactggcagc 480
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<210> 601

<211> 931

<212> DNA

<213> Unknown (H38g450 nucleotide)

<220>

<223> Synthetic construct

<221> misc_feature

<222> (1)...(931)

<223> n = A,T,C or G

<400> 601

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gctttaattg gcaatcagtc cgtgatcctt ctcatcttct tggacactca tctccacacg 180
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gtccccagat gttttctgat tttctgtttg gaaacaagtc tatttctctc attgggtgtg 300
gaattcagag tttcttcttt gtgactttag cagggtgcaga aatgctgcca ctgacatcaa 360
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cctcactgta gtaattntct actatgcaat gtttgcttat acctatctat atccaagata 780
cctgcaatct ccaacagagg acaaggttct ggctgtgttc tacaccatcc tcacctcaat 840
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gagtcagaga atcttccctg tgaagatgaa g 931

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<210> 602

<211> 577

<212> DNA

<213> Unknown (H38g451 nucleotide)

<220>

<223> Synthetic construct

<400> 602

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tatctggta tggttctgag gaacctgtc agcatcctgg ctgtcagctc tgactcccc 180
ctccataccc ccatgtactt ctctctctcc aacctgtgct gggctgacat cgggttcaact 240
tcggccacgg ttcccaagggt gactgtggac atgcagtgc atagcagagt catctctcat 300
gcgggctgcc tgacacagat gtctttcttg gtcctttttt gcatgtatag aatgcagtgt 360

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cctgactgtg	atggcctatg	acggctttgt	agccatctgt	ctccctctgc	actacccagt	420
catcatgaat	cctcacctct	gtgtcttctt	cgttttggtg	tcctttttcc	ttagcctggt	480
ggattcccag	ctgcacgggt	ggattgtgtg	acaattcacc	atcatgaaga	atgtggaaat	540
ctctcatttt	gtaagtgacc	cctctcaact	tctcaac			577

<210> 603

<211> 952

<212> DNA

<213> Unknown (H38g452 nucleotide)

<220>

<223> Synthetic construct

<400> 603

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gagaacctgc	taatcatcct	ggccattggc	tctgacctgc	acctccacac	cccccatgta	180
cctcttctcg	tccaacctgt	ccttttttga	tattggcttt	atctctacaa	taattcccaa	240
gatgctagat	catattagct	caggaattaa	gctgatttct	tatggggagt	gtctgacaca	300
actctatttc	tctggcctat	ttgcagatct	ggacaacaac	tttctcctgg	ctgtgatggc	360
ccttgaccgc	tatgtggcca	tcagccatcc	tctccattat	gccctaacca	tgaactccca	420
acgctgtgtc	ctgttggtgg	ctgtgtcatg	ggtgatcact	atcttacctg	ccctagtgcg	480
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catccttggt	gcaggaacac	tgtctgattg	gccctttgtc	tgcctcctta	tgtcctactt	660
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cagctgcact	tccacacctc	ctgtagtctc	tctgttctat	agcacagcta	tcgggtgtct	780
tttatgtcct	ccatcatccc	actcagatgg	aaaggacaga	gtcttctcag	tcatgtacac	840
ggtggtgact	cccattgtga	accccttcat	ctacagcctg	aggaacaggg	atatgaaggg	900
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<210> 604

<211> 754

<212> DNA

<213> Unknown (H38g453 nucleotide)

<220>

<223> Synthetic construct

<400> 604

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tgaacattcc	gttgtaggtc	gctggtagct	ggatatgtcc	tttaaaactt	tgtggcaatt	120
catttgagaa	gaaacgcagc	tttttctatt	gagttcttat	gctataagta	aaggatgcaa	180
gacattaatt	agacaaaata	aggtaaaatt	ttgtattcgc	ttagagaggt	taagaggcta	240
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gcttagtaag	taaacaaatt	gaaacttatt	ttaggaaaga	aatatatatt	cttatatcta	360
catcagattc	tcttatgtag	aaacactaga	gggtgaatga	ggagttaatg	taagcagcat	420
catatttttg	ctcattcctt	tctctatgat	ttctgcttct	tctgtccaaa	ttctgtgagg	480
tgtcctctag	atgaaattat	cacaggcatg	gaaaagggtca	ttttccactt	ggtccatcct	540
catgattgca	gttgtaacat	actgggactc	attcattttc	acatatgtat	atgagactta	600
aatcatccac	atttcaggcc	aggtttaagt	tctagaaata	ttctatgctt	tccttgcaact	660
tacactcaat	cctgtcgtct	acagcgttgg	cactgacagt	gttctgtgtg	caatgaaaaa	720
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<210> 605

<211> 939

<212> DNA

<213> Unknown (H38g454 nucleotide)

<220>

<223> Synthetic construct

<400> 605

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cgagagctgg	agtttttctt	gtttgtggtc	ttctttgctg	tgtatgtagc	aacagtcctg	120
ggaaatgcac	tcattgtggt	cactattacc	tgtgagtcce	gcctacacac	tcctatgtac	180
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atctttttct	tccactttgc	tgggtggggca	gatatttttt	tcctctctgt	gatggcctat	360
gacagatacc	ttgcaatcgc	caagccctcg	cactatgtga	ccatgatgag	gaaagaggtg	420
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atgctgaacc	ccatcatcta	ttcctgaga	aatcaagaga	tgaagtcagc	catgcagagg	900
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<210> 606

<211> 927

<212> DNA

<213> Unknown (H38g455 nucleotide)

<220>

<223> Synthetic construct

<400> 606

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acagggaacc	tgtcatcat	cctggccatt	cgcttcaacc	cccatcttca	gaccctatg	180
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aagatgctga	tgaacttctt	gtcagaaaag	aagaccatct	cctatgctgg	gtgtctgaca	300
cagatgtatt	ttctctatgc	cttgggcaac	agtgcagct	gccttctggc	agtcatggcc	360
tttgaccgct	atgtggccgt	ctgtgaccct	ttccactatg	tcaccaccat	gagccaccac	420
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cgaatcctca	ctacagttct	caagattccc	tctacttctg	ggaaacgcaa	agccttctcc	720
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ttacagcccc	catccaccta	cgctgtcaag	gaccacgtgg	caacaattgt	ttacacagtt	840
ttgtcatcca	tgtcaatcc	ttttatctac	agcctgagaa	acaaagacct	gaaacagggc	900
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<210> 607

<211> 939

<212> DNA

<213> Unknown (H38g456 nucleotide)

<220>

<223> Synthetic construct

<400> 607

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ctgcggattt	tatatggtgt	gctcttccca	ctgatttacc	tggcagccct	aatgagtaac	120
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ccttcaaatt	caccatctgt	tattgacagg	ctgctttctg	tgatctacac	tgtgatgcct	840
ccagtattta	accctgtaac	ctacagcctg	cggaacaatg	acatgaaatg	tgctctgata	900
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<210> 608

<211> 972

<212> DNA

<213> Unknown (H38g457 nucleotide)

<220>

<223> Synthetic construct

<400> 608

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gcttggaact	taagcctcat	tgccttcatt	aagatggact	ctcacctgca	catgcccatt	180
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gccatgagga	aagccatgga	aagggacccc	gggattttctc	acggtgggacc	attcattttt	960
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<210> 609

<211> 942

<212> DNA

<213> Unknown (H38g458 nucleotide)

<220>

<223> Synthetic construct

<400> 609

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ggggctctgt	atgcattttc	atgttttagt	tgcattgtag	tttccctatg	gtacattttc	660
tctgctgtgt	taaggatata	acagagacag	agacaatcca	aagccttttc	caactgtgtg	720
cctcacctca	ttgttgtcac	tgtgtttctt	gtaacagggt	ctgttgctta	tttaaagcca	780
gggtctgatg	caccttctat	tctagacttg	ctgggtgtctg	tgttctatct	tgctcgacct	840
ccaaccttga	accctgttat	ctactgtctg	aagaacaagg	acattaaatc	cgctctgagt	900

aaagtcctgt ggaatgtag aagcagtggg gtaatgaaaa ga

942

<210> 610

<211> 921

<212> DNA

<213> Unknown (H38g459 nucleotide)

<220>

<223> Synthetic construct

<400> 610

atgaatcaca	gcgttgtaac	tgagttcatt	attctggggc	tcaccaaaaa	gcctgaactc	60
caggggaatta	tcttcctctt	ttttctcatt	gtctatcttg	tggtttttct	cggcaacatg	120
ctcatcatca	ttgcaaaaat	ctataacaac	accttgcata	cgcccatgta	tgttttcctt	180
ctgacactgg	ctgttggtga	catcatctgc	acaacaagca	tcataaccga	gatgctgggg	240
accatgctaa	catcagaaaa	taccatttca	tatgcaggct	gcattgtcca	gctcttcttg	300
ttcacatggt	ctctgggagc	tgagatggtt	ctcttcacca	ccatggccta	tgaccgctat	360
gtggccattt	gtttccctct	tcattacagt	actgttatga	accaccatat	gtgtgtagcc	420
ttgctcagca	tggtcatggc	tattgcagtc	accaattcct	gggtgcacac	agctcttctc	480
atgaggttga	ctttctgtgg	gccaaacacc	attgaccact	tcttctgtga	gataccccca	540
ttgctggctt	tgctctgtag	ccctgtaaga	atcaatgagg	tgatggtgta	tggtgctgat	600
attaccctgg	ccatagggga	ctttattctt	acctgcatct	cctatgggtt	tatcattggt	660
gctattctcc	gtatccgcac	agtagaaggc	aagaggaagg	ccttctcaac	atgctcatct	720
catctcacag	tggtgaccct	ttactattct	ctgtaatctt	acacctatat	ccgccctgct	780
tccagctata	catttgaaag	agacaagggt	gtagctgcac	tctatactct	tgtagctccc	840
acattaaacc	cgatggtgta	cagcttccag	aatagggaga	tgcaggcagg	aattaggaag	900
gtgtttgcat	ttctgaaaca	c				921

<210> 611

<211> 810

<212> DNA

<213> Unknown (H38g460 nucleotide)

<220>

<223> Synthetic construct

<400> 611

atggaagtga	gtgggaacca	cacctctgtg	gccatgtttg	ttctcctagg	actctcagat	60
gaaaaagagc	tgcagctcat	cctctttcca	gtcttctctg	tgatctacct	tgtgaccctg	120
atttggaaca	tggtctttat	catctctcat	agaatagact	ctcatctgaa	cacacccatg	180
tacttttttc	tcagtttctt	ctcattttaca	gacatctgct	attcttctac	catcagccca	240
aggatgcttt	cagactttct	aaaagataag	aagacaattt	ccttcttctg	ctgtgccact	300
cagtattttc	ttggggcctg	gatgagctct	gctgagtgct	gcctcttggt	catcatggcc	360
tgtgacagat	atgtggccat	tggcagcccc	ctgcagtact	cagcaatcat	ggtccctagt	420
atctgttgga	agatggtagc	tggagtctgt	gggggtggat	tccttagtag	cttagttcat	480
acagtccctt	gctttaatct	ctactactgt	gggccaataa	tcattcaaca	tttcttctgt	540
aacacacttc	agattatttc	cttgtcttgc	tccaaccctt	ttatcagcca	aatgattctt	600
tttctggaag	ctatttttgt	tgggttgggc	tctttgcttg	ttatcctttt	gtcttatggg	660
ttcattgtag	cttcataact	gaaaatatca	tcaaccaaatt	gttggtgcaa	ggccttcaat	720
acctgtgctt	cccacctggc	agctgtggct	ctcttctatg	gcacagccct	ttctgtgtac	780
atgcatacta	gctctagcca	ctccatgaag				810

<210> 612

<211> 988

<212> DNA

<213> Unknown (H38g461 nucleotide)

<220>

<223> Synthetic construct

<400> 612

tactccaaag	aaattataga	ataatgtact	tccaatgata	ttataaaatg	tggtttagcat	60
aataagatta	ctttttttac	tgttttatcct	tttagagttc	acagaagatt	tgggggttaca	120
gcaagtgtct	tttttcatct	tttctcatcat	ttatgtcatc	agcctctcag	gcaacatcat	180
tctgaattct	ctcatctgtg	ctgattcttg	gccctacaca	cccatgtatt	tcttctactgg	240
aaaccggttc	cttctggatc	tctgggtattc	ctctgtccac	atccccgata	tccctgtgac	300
ttgcatttct	gatgacaaaa	ccatctcctt	tcctggctgc	cttgctcagt	tcttctctgc	360
tgtgttggcc	taaaatgagt	gctatatgat	ggcttccatg	gcttatgacc	gctacatggc	420
aatctccaag	cccctgcttt	attccccggc	cacattccca	gagttatgtg	ccagtcttgt	480
tgaggcttca	caccttggcg	gctttgtaaa	ctcaaccatc	atcaccagtg	agacacctac	540
cttgagcttc	tgtggcagca	atatcattga	tgatttcttc	tgtgatctgc	ccccacttgt	600
aaagttgggtg	tgtgatgtga	aggagcgcta	ccaggctgtg	ctgcatttta	tgcttgccctc	660
caatcatcac	tcccactgca	cttattcttg	cgtccatctc	ttcatcattg	cagccatctc	720
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tgcttataaa	atggataaat	tggggtcagt	gttctatact	gtggtgattc	caatgctaaa	900
ccccttgatc	tatagcttaa	gaaataagga	tgtcaaagat	gccttgaaga	aaatgttaga	960
tagacttcag	tttcttaaag	aaaaatat				988

<210> 613

<211> 1049

<212> DNA

<213> Unknown (H38g462 nucleotide)

<220>

<223> Synthetic construct

<400> 613

atggagcaga	gcaattattc	cgtgtatgcc	gactttatcc	ttctggggtt	gttcagcaac	60
gcccgtttcc	cctggcttct	ttgccctcat	tctcctgggc	tttgtgacct	ccatagccag	120
caacgtggtc	aagatcattc	tcattccacat	agactcccgc	ctccacaccc	ccatgtactt	180
cctgctcagc	cagctctccc	tcaggagacat	cttgtatatt	tccaccattg	tgcccaaaat	240
gctggtcgac	caggtgatga	gccagagagc	catttccctt	gcaggatgca	ctgcccaca	300
cttccctctac	ttgaccttag	caggggctga	gttcttccctc	ctaggactca	tgtcctgtga	360
tcgctacgta	gccatctgca	accctctgca	ctatcctgac	ctcatgagcc	gcaagatctg	420
ctgggttgatt	gtggcggcag	cctggctggg	aggggtctatc	aatgggttct	tgctcacccc	480
cgtcaccacg	cagttcccct	tctgtgcctc	tcgggagatc	aaccacttct	tctgctgaggt	540
gectgccctt	ctgaagctct	cctgcacgga	cacatcagcc	tatgagacag	ccatgtatgt	600
ctgctgtatt	atgatgtctc	tcattccctt	ctctgtgac	tcgggctctt	acacaagaat	660
tctctattact	gtttatagga	tgagcagagg	agaggggagg	cgaagggtg	tgccacctg	720
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gcctcattct	taccacaccc	ctgagcagga	caaagctgta	tctgccttct	acaccatcct	840
cactcccattg	ctcaatccac	tcattttacag	ccttaggaac	aaggatgtca	cggggggccct	900
acagaagggt	gttgggaggt	gtgtgtcctc	aggaaaggta	accactttct	aaacaaattg	960
catatgctgc	tagagacttg	aaatgaagga	tacaagactt	tatcattgcc	cttgagttta	1020
aatattctct	gcctggaaac	aagtgaacc				1049

<210> 614

<211> 957

<212> DNA

<213> Unknown (H38g463 nucleotide)

<220>

<223> Synthetic construct

<400> 614

atgggtgttc	acaatttggt	cacgggtgact	cagtttatcc	ttatagggct	ctcttacttc	60
tccaatgagc	actaccttct	ttttgtggcc	cttgccatta	tctgtcagggt	gttcttggtg	120
cgaagtggag	acattctctt	ggccattggg	actgtgatta	agttgcacac	tactcatgta	180
ttattttttg	gcaaattgtg	ccatcttaga	catattgtgt	tcatacagcta	ctatacctaa	240
gatgccttaag	attctctaga	ctgaggatca	cagcatttct	tttgtaggt	gagctttgca	300
gccctatttc	ctagtggcct	gggctgggaa	gaaagcttcc	tcactgttac	ggcttatgac	360

tgggtgtgtgg	tcacatgttt	ctccctttgt	tacatcctga	tcataaaca	attggctctg	420
tccagctggg	ttatgggacc	tgagcagctg	ggtttctaaa	tttctctctc	ctccacgtag	480
tgtctaccct	ctgcctgtct	ttctgcaagc	ctgatcgagt	taaccagtat	tactgtgata	540
tctcaccgat	gggggacctg	ttgtgccagt	ccatgcacct	ggcaaaccatg	cttgttttag	600
tgggaatcagt	tatcttgggg	atcagtgtct	ttctggctgc	ctttaacttt	tacatatata	660
tcactctccac	tatcctaaag	atccagtgtg	tagagtggag	tgcaaagtgc	ttctctacat	720
gcacttccca	cctccttacg	gtctgtttgt	tctatggcat	attgacattt	acctacattt	780
actccttctc	cagtcaaacac	tcacatgtct	aaggcaagcc	cagatctagc	cacagacagg	840
ctcatctcta	tgctatacag	agttattacc	ctgatgttta	acttcatcac	tgacaacctg	900
agaaacacag	aggtaaaagg	agcctcagaa	agggttttatg	tcattgaaca	tgtttat	957

<210> 615

<211> 840

<212> DNA

<213> Unknown (H38g464 nucleotide)

<220>

<223> Synthetic construct

<221> misc_feature

<222> (1)...(840)

<223> n = A,T,C or G

<400> 615

atgtacctga	ccacgggtgct	ggggaacctg	ctcatcatgc	tgctcatcca	gctggactct	60
caccttcaca	cccccatgta	cttcttctctc	agccacttgg	ctctcactta	tttttctttt	120
tcactctgtca	ctgtccctaa	gatgctgatg	gacatgcgga	ctaagtacaa	atcgatctctc	180
tatgaggaat	gcattttctca	gatgtatttt	tttatatttt	ttactgacct	ggacagcttc	240
cttattacat	caatggcata	tgaccgatat	gttgccatat	gtcaccctct	ccactacact	300
gtcatcatga	gggaagagct	ctgtgtcttc	ttagtggctg	tatcttggat	tctgtcttgt	360
gccagctccc	tctctcacac	ccttctctctg	accggctgtg	ctttctgtgc	tgccaacacc	420
atcccccatg	tcttctgtga	ccttgtctgcc	ctgctcaagc	tgctctgctc	agatatcttc	480
ctcaatgagc	tggtcatgtt	cacagtaggg	gtggtggtca	ttaccctgcc	attcatgtgt	540
atcctgggat	catatggcta	cattggggcc	accatcctga	gggtcccttc	aaccaaaggg	600
atccacaaag	cattgtccac	atgtggctcc	catctctctg	tggtgtctct	ctattatggg	660
tcaatatttg	gccagtacct	tttcccgaact	gtaagcagtt	ctattgacaa	ggatgtcatt	720
gtggctctca	tgtaacagg	ggtaacaccc	atgttgaacc	cctttatcta	cngcattngg	780
aacagggaca	tgaaagaggc	ccttgggaaa	ctcttcagta	gagcaacatt	tttctcttgg	840

<210> 616

<211> 909

<212> DNA

<213> Unknown (H38g465 nucleotide)

<220>

<223> Synthetic construct

<400> 616

atgaattcat	caagtgactg	aagacaacca	gtgatggacg	gggtgaatga	tagctccttg	60
cagggttttg	ttctgatggg	catatcagac	catccccagc	tggagatgat	cttttttata	120
gccatcctct	tctctatttt	gctgacccta	cttggaact	caaccatcat	cttgcctttcc	180
cgcctggagg	cccggctcca	tacacccatg	tacttcttcc	tcagcaacct	ctcctccttg	240
gaccttgctt	tcgctactag	ttcagtcccc	caaagtctga	tcaatttatg	gggaccaggc	300
aagaccatca	gctatgggtg	ctgcataacc	cagctctatg	tcttcccttg	gctggggggcc	360
accgagtga	tctgtctggt	ggtgatggca	tttgaccgct	acgtggcagt	gtgccggccc	420
ctccgctaca	ccgccatcat	gaacccccag	ctctgctggc	tgctggctgt	gattgcctgc	480
ctgggtggct	tgggcaactc	tgtgatccag	tcaacattca	ctctgcagct	cccattgtgt	540
gggcaccgga	gggtggaggg	attcctctgc	gaggtgcctg	ccatgatcaa	actggcctgt	600
ggcgacacaa	gtctcaacca	ggctgtgctc	aatggtgtct	gcaccttctt	cactgcagtc	660
ccactaagca	tcactgtgat	ctcctactgc	ctcattgtctc	aggcagtgct	gaaaatccgc	720
tctgcagagg	ggaggcgaaa	ggcgttcaat	acgtgcctct	cccatctgct	gggtggtgtc	780

ctctttctatg	gctcagccag	ctatgggtat	ctgcttccgg	ccaagaacag	caaacaggac	840
cagggcaagt	tcatttccct	gttctactcg	ttggtcacac	ccatggtgaa	tcccctcatc	900
tacacgctg						909

<210> 617

<211> 926

<212> DNA

<213> Unknown (H38g466 nucleotide)

<220>

<223> Synthetic construct

<400> 617

atgcagagga	gcaatcacac	agtgactgag	ttcatcctgc	tgggcttcac	cacagatcca	60
gggatgcaac	tgggcctctt	tgtggtgttc	ctgggtgtgt	actgtctgac	tgtggtagga	120
agtagcaccc	tcacgtgttt	gatctgtaat	gactcccacc	tacacacacc	catgtatttt	180
gtcattggaa	atctgtcatt	tctggatctc	tggtattctt	ctgtctacac	cccaaagatc	240
ctagtacact	gcatctctga	agacaaaagc	atctcctttg	ctggctgcct	gtgtcagttc	300
ttctctgcca	ggctggccta	tagtgagtgc	tacctactgg	ctgccatggc	ttatgaccac	360
tacgtggcca	tctccaagcc	cctgctttat	gctcagacca	tgccaaggag	attgtgcatc	420
tgtttggttt	tatatccta	tactgggggt	tttgtcaatg	caataatatt	aaccagcaac	480
acattcacat	tggatttttg	tggtgacaat	gtcattgatg	actttttctg	tgatgtccca	540
cccctcgtga	agctggcatg	cagtgtgaga	gctaccaggc	tgtgctgcac	ttccttctgg	600
cctccaatgt	catctcccct	actgtgctca	tccttgccctc	ttacctctcc	atcatcacca	660
ccatcctgag	gatccactct	accaggggcc	gcatcaaagt	cttctccaca	tgctcctccc	720
acctgatctc	cgttacctta	tactatggct	ccattctcta	caactactcc	cggccaagtt	780
ccagctactc	cctcaagagg	gacaaaatgg	tttctacctt	ttatactatg	ctgttcccca	840
tgttgaatcc	catgatctac	agtctgagga	ataaagacat	gaaagacgct	ctgaaaaaat	900
tcttcaagtc	agcataatcc	aaagtc				926

<210> 618

<211> 936

<212> DNA

<213> Unknown (H38g467 nucleotide)

<220>

<223> Synthetic construct

<400> 618

atggacgggg	tgaatgatag	ctccttgcag	ggctttgttc	tgatgagcat	atcggaccat	60
ccccagctgg	agatgatctt	ttttatagcc	atcctcttct	cctatttget	gaccctactt	120
gggaactcaa	ccatcatctt	gctttcccgc	ctggaggccc	ggctccatac	acccatgtac	180
ttcttctca	gcaacctctc	ctccttggac	cttgctttcg	ctactagtcc	agtcgcccac	240
atgctgatca	atttatgggg	accaggcaag	accatcagct	atggtggctg	cataaccagg	300
ctctatgtct	tcctttgggt	ggggggccacc	gagtgcaccc	tgctgggtgg	gatggcattt	360
gaccgctacg	tggcagtggt	ccggccccctc	cgctacaccg	ccatcatgaa	ccccagctc	420
tgctggctgc	tggctgtgat	tgccctggctg	ggtggcttgg	gcaactctgt	gatccagtca	480
acattcactc	tgcagctccc	attgtgtggg	caccggaggg	tggagggtat	cctctgcgag	540
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ggtgtctgca	ccttcttcac	tgcagtccca	ctaagcatca	tcgtgatctc	ctactgcctc	660
attgctcagg	cagtgtcgaa	aatccactct	gcagagggga	ggcgaaaggc	gttcaatacg	720
tgccctctcc	atctgctggt	ggtgttccctc	ttctatggct	cagccagcta	tgggtatctg	780
cttccggcca	agaacagcaa	acaggaccga	ggcaagttca	tttccctggt	ctactcgttg	840
gtcacaccca	tgggtgaatcc	cctcatctac	acgtgcgga	acatggaagt	gaagggcgca	900
ctgaggaggt	tgctggggaa	aggaagagaa	gttggc			936

<210> 619

<211> 247

<212> DNA

<213> Unknown (H38g468 nucleotide)

<220>

<223> Synthetic construct

<400> 619

ggtgagagggc ttaagacact caacacatgt gtgtcacata tctatgcagt gctgatcttc	60
tatgtgccta tggtagtggt gtccatgggt catcgatttg ggaggcatgc tcctgaatat	120
gtgcacaagt tcatgtctct ttgtacctcc aatgctctac ccaattatct attccatcaa	180
gactaaggag attcgcagga gactacacaa gatgttattg ggagctaagt tctgatcaag	240
gaaaact	247

<210> 620

<211> 936

<212> DNA

<213> Unknown (H38g469 nucleotide)

<220>

<223> Synthetic construct

<400> 620

atggaagtgg gaaattgcac catcctgact gaattcatct tgttggggtt ctcagcagat	60
tcccagtggc agccgattct atttggagtg tttctgatgc tctatttgat aaccttgtca	120
ggaaacatga ccttggttat cttaatccga actgattccc acttgcatac acctatgtac	180
tttttcattg gcaatctgtc ttttttggat ttctgggtata cctctgtgta tcccccaaaa	240
atcctggcca gttgtgtctc agaagataag cgcatttcct tggctggatg tggggctcag	300
ctgttttttt cctgtgttgt agcctacact gaatgctatc tctggcagc catggcatat	360
gaccgccatg cagcaatttg taaccattg ctttattcag gtaccatgtc caccgccctc	420
tgtactgggc ttgttgctgg ctccacata ggaggatttt tgaatgccat agcccatact	480
gccaatacat tccgcctgca tttttgtggt aaaaatatca ttgaccactt tttctgtgat	540
gcaccaccat tggtaaaaat gtccctgtaca aacaccaggg tctacgaaaa agtcctgctt	600
ggtgtggtgg gcttcacagt actctccagc attcttgcta tcttgatttc ctatgtcaac	660
atcctcctgg ctatcctgag aatccactca gcttcaggaa gacacaaggc attctccacc	720
tgtgcttccc acctcatctc agtcatgctc ttctatggat cattgttggt tatgtattca	780
aggcctagtt ccacctactc cctagagagg gacaaagtag ctgctctggt ctacaccgtg	840
atcaaccac tgctcaacc tctcatctat agcctgagaa acaaagatat caaagaggcc	900
ttcaggaaaag caacacagac tatacaacca caaaca	936

<210> 621

<211> 954

<212> DNA

<213> Unknown (H38g470 nucleotide)

<220>

<223> Synthetic construct

<400> 621

atgcctactg taaaccacag tggcactagc cacacagtct tccacttgct gggcatccct	60
ggcctacagg accagcacat gtggatttct atcccattct tcatttecta tgtcaccgcc	120
cttcttggga acagcctgct catcttcatt atcctcacia agcgcagcct ccatgaaccc	180
atgtacctct tcctctgcat gctggctgga gcagacattg tcctctccac gtgcaccatt	240
cctcaggcct tagctatctt ctgggtccgt gctggggaca tctccctgga tcgttgcatc	300
actcagctct tcttcatcca ttcaccttc atctctgagt cagggatctt gctgggtgatg	360
gcctttgacc actatattgc catatgttac ccactgaggt acaccaccat tcttacaat	420
gctctgatca agaaaaattg tgtgactgtc tctctgagaa gttatggtac aattttccct	480
atcatatttc ttttaaaaag attgactttc tgccagaata atattattcc acacaccttt	540
tgtgaacaca ttggcctagc caaatatgca tgtaatgaca ttcgaataaa catttggtat	600
gggttttcca ttctaattgc gacggtgggc ttagatggtg tactaatttt tatttcctat	660
atgctgatcc tccatgctgt ctccacatg ccttctccag atgcttgcca caaagctctc	720
aacacatttg gctcccatgt ctgcacatc atcctctttt atgggtctgg catcttcaca	780
atccttacct agaggttttg acgccacatt ccaccttgta tccacatccc gttggcta	840
gtctgcattc tggctccacc tatgctgaat cccattattt atgggatcaa aaccaagcaa	900
atccaggaa aggtggttca gtttttgttt ataaaacaga aaataacttt ggtt	954

<210> 622
 <211> 942
 <212> DNA
 <213> Unknown (H38g471 nucleotide)

<220>
 <223> Synthetic construct

<400> 622
 atggaggctg ccaatgagtc ttcagaggga atctcattcg ttttattggg actgacaaca 60
 agtcctggac agcagcggcc tctctttgtg ctgttcttgc tcttgatgt ggccagcctc 120
 ctgggtaatg gactcattgt ggctgccatc caggccagtc cagcccttca tgcacccatg 180
 tacttctctg tggcccacct gtcttttctg gacctctgtt tcgcctccgt cactgtgccc 240
 aagatgttgg ccaacttgtt ggcccagtc cactccatct cgctggctgg ctgctgacc 300
 caaatgtact tcttctttgc cctgggggta actgatagct gtcttctggc ggccatggcc 360
 tatgactgct acgtggccat ccggcaccac ctcccctatg ccacgaggat gtcccggggc 420
 atgtgcgcag ccctgggtggg aatggcatgg ctggtgtccc acgtccactc cctcctgtat 480
 atcctgctca tggctcgctt gtcttctgtg gcttcccacc aagtgcacca cttcttctgt 540
 gaccaccagc ctctcttaag gctctctgtc tctgacaccc accacatcca gctgctcatc 600
 ttcaccgagg gcgcgcagc ggtggtcact cccttctctg tcatcctcgc ctctatggg 660
 gccatcgag ctgcccgtgt ccagctgccc tcagcctctg ggaggctccg ggctgtgtcc 720
 acctgtggt cccacctggc tgtggtgagc ctcttctatg ggacagtcac tgcagtctac 780
 ttccaggcca catcccagc cgaggcagag tggggccgtg tggccactgt catgtacact 840
 gtagtcaccc ccagctgaa ccccatcatc tacagcctct ggaatcgga tgtacagggg 900
 gcactccgag cccttctcat tgggcgaagg atctcagcta gt 942

<210> 623
 <211> 946
 <212> DNA
 <213> Unknown (H38g472 nucleotide)

<220>
 <223> Synthetic construct

<400> 623
 atctctatgt tctcctgcaa caccagcact tctggtcagt ctaccttccct cctcactggg 60
 tttccaggcc tggaagcctc tcatcattgg gtttccatcc ccataaccc cttctgtgtg 120
 gtttccatcc tgggtaataa tatcatctc ttcctgatcc acacagatcc agccttacat 180
 gaacccatgt atatcttccct gtccatgttg gcagcctctg atctgggcct ctgtgcctct 240
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 tgtgcagcac agatgttctt catccatacc ttcacctatg tggagtccgg tgtactgctg 360
 gccatggcct tcgatcgctt tattgccatc cgggaccctc tgcattatgc cataatcatt 420
 acctgctcag tcacagccga ggtgggaact gccattcttg tgagggtgt tctgctcaac 480
 ctcccgggac ctatcctcct gcagcagctg ctctttccca agatcagcgc tctctgtcac 540
 tgctactgcc tgcaactgtga ccttgtgggg ttggcctgct cagacacca gatcaatagc 600
 ctggttggcc tgggttccat cctcttctca ctgtgccttg actccttccat catcatgctt 660
 tcatatgccc tgatcctatg aactgtgctg ggcattgcat cacctgggga gcggctcaag 720
 gcactcaaca cgtgtgtctc acacctctgc attgttctca tcttttattt gcccaaacgg 780
 gctgtctgtc ttgcaccgag taaagaagca tgactacct gctctggcag tgctcatggc 840
 caacctacac ttcttgggcc cacccttcat gaacccatt gtgtattgca tcaagtctag 900
 gcagatccgt cagagcctcc taaagcactt ccagcagaag aggatt 946

<210> 624
 <211> 960
 <212> DNA
 <213> Unknown (H38g473 nucleotide)

<220>
 <223> Synthetic construct

<400> 624

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gatccagaac	tgcagcccgt	cctcgctggg	ttgtcccgtt	ccatgtatct	ggtcacagtg	120
ctgaggaacc	tgctcatcat	cctggctgtc	agctctgact	cccacctcca	cacccccatg	180
tactttcttc	tctccaacct	gtgctgggct	gacatcggtt	tcacctcggc	catggttccc	240
aagatgattg	tggacatgca	gtctcatagc	agagtcacat	cttatgcggg	ctgcctgaca	300
cggatgtcct	tcttggtcct	ttttgcatgt	atagaagaca	tgctcctgac	tgcatgggcc	360
tatgactgct	ttgtagccat	ctgtcgccct	ctgcactacc	cagtcacatgt	gaatcctcac	420
ctctctgtct	tcttagtttt	gggtgccttt	ttccttagcc	tggtggatcc	ccagctgcac	480
agttagattg	tgttacaatt	cacctctctc	aagaatgtgg	aaatctctaa	ttttgtctgt	540
gagccatctc	agctttctca	ccttgccctgt	tctgacagcg	tcatacaatag	catattctta	600
tatttcgata	gtactatggt	tgggtttctt	cccatttcaa	ggatcctttt	gtcttactat	660
aaaattgtcc	cctctattct	aaggatttca	tcgtcagatg	ggaagtataa	agccttctcc	720
acctgtggct	ctcacctggc	agttgtttgc	ttattttatg	gaacaggcat	tggcgtgtac	780
ctgacttcag	ctgtgtcacc	accccccagg	agtggtgtgg	tggcgtcagt	gatgtacgct	840
gtggtcacc	ccatgctgaa	ccctttctac	tatagcctga	gaaacagaga	cattcaaaagc	900
gccctctgga	ggctgcgcag	cagaacagtc	gaatctcatg	atctgttcca	tcctttttct	960

<210> 625

<211> 985

<212> DNA

<213> Unknown (H38g474 nucleotide)

<220>

<223> Synthetic construct

<400> 625

atgaaactca	taaaccatac	catcagaacc	caacctcctt	tctgctcatg	ggaattccag	60
gccccgaggg	atcccacttt	tggattgctt	ttcccttctg	ctccatgtat	gccctggcag	120
tgctgggaaa	catggtgggtg	ctgctagtgg	tacattcaga	gcctgtattg	caccagccca	180
tgtaacctgtt	cctctgcatg	ctatccacca	ttgacctggg	cctctgcacc	tcactgtgct	240
ccaagctcct	tgcacttttt	tgggcaaagg	atgctgagat	caactttggg	gcctgtgctg	300
cccagatgtt	ctttatccat	ggcttctcag	ctgtagaatc	tggatatactg	ctagcaatgg	360
cctttgaccg	ctacttagcc	atttgctggc	ctctgcacta	tgggtcattg	ctctccccag	420
agtctgtagg	caagctgggg	gctgcagcgt	gcttcgtggg	ttgggactca	tgacccact	480
cacctgctta	ctggcaagac	tgagctactg	cagtcgagtg	gtggccact	cctactgtga	540
acacatggct	gtggtaaagc	tggcttggg	aggaacacag	ccaaacaaca	tctatggcat	600
cactgctgcc	acactgggtg	tgggcaactg	ctccatctgt	attgctgtct	cctatgcact	660
cactctccga	gctgtgttag	gtctttctct	caaggaggca	agggctaaga	cctttggcac	720
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cacacagcgg	tttggccagc	acgtgccccg	gcacatccac	atccttctag	ctgacctcta	840
cctggtttgt	ccacccatgc	tcaaccccat	catctatggc	atgaagacca	aacagatctg	900
ggatggggcc	ctccggcttc	tgaagtgggg	ccctgctcag	tcataaagtc	ttcaacccca	960
ccctgaaacc	tttatcttct	ttgcc				985

<210> 626

<211> 989

<212> DNA

<213> Unknown (H38g475 nucleotide)

<220>

<223> Synthetic construct

<400> 626

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gatccagaac	tgcagcctgt	cctcggtggg	gtgtccctgt	ccatgtatgg	ggtcacagtg	120
ataaggaacg	tgctcatcat	cctgggtgtg	agctctgact	cccacctcca	cacccccatg	180
ttttttctct	ctccaacgtg	tgggtgggctg	acatcagttt	cacgtcggcc	ggggttccca	240
agatgacggg	ggacatgcag	tcgcatagca	gagtcactta	ttatgcgggc	tgcatgactc	300
ggatgtcttt	tttgcctctt	ttagcatgta	tagaagacat	gctcgtgtgt	gtgatggcat	360
aggagtgtct	tgtagccatg	tgctgcctctg	tgcaatacac	agttattgta	aatcctcacc	420

tgtgtgtttt	cagagttggg	gtgtcctttc	tccagagcgt	gttgtattcc	caggtgcaca	480
gatagagtgt	gtcacaattc	acttttttca	agaatgtgga	aatctctcat	tttgtgtgtg	540
agccatctca	atctctccac	tttgcggtgt	gtgacagttt	catcaagagc	atattcatgt	600
atttcgatag	taatatgttt	ggttttcttc	ccatcacagg	gatctttttg	tcttaatata	660
aaagtgtccc	ctccattata	aggatttcat	cgtcagatgg	aaagtataaa	gctttctcca	720
cgtgtggctc	tcacgtggca	gttgtttgct	tattatatgg	aacaggcatt	ggggtgtaca	780
tgacttcagg	tgtggcacca	ccccccagca	atgggtgtgg	ggcatcagtg	aagtacgcgg	840
tggtcacccc	catgctgacc	cctttcatct	acagcgtgag	aaacagggac	attcaaagcc	900
ccctgtggag	tgtgtgcagc	agcacagtta	aatcttttga	tgtgtcccat	cttttttgtg	960
tgtgggtaag	aaagggcacc	cacattaaa				989

<210> 627

<211> 512

<212> DNA

<213> Unknown (H38g476 nucleotide)

<220>

<223> Synthetic construct

<400> 627

cacacacagc	cacgggggtct	cacacgtgtg	tgagaattcc	tcctcctggg	actctcacag	60
gatccacaac	tgcagctgtg	ctctctgggc	tgtccctgtg	catgtgtctg	ggcacacagc	120
tggggaacct	gctgcatcat	cctgggtgtg	agctctgact	cccacctcca	cacccccatg	180
tactcttttc	tctccaacct	gtgctggggc	tgacatcagt	ttcacctcca	ccacggggcc	240
caagttgatt	gtggacatcc	actcttacac	cagagacatc	tcctatgcac	gctgtctgac	300
tcacacacct	ctctttggca	tttttggagg	cgtgggaaag	agacatgctc	ctgagagtga	360
tgggctatga	ccgcgttgta	gacatctgtg	accctctata	tcattcacac	gccatgaacc	420
cctgtgtctg	tggctctcta	gatttgtggg	ctcttttttt	tctcacactt	ttatacacc	480
acctgcacaa	ctcgattgcc	ttacacatga	cc			512

<210> 628

<211> 967

<212> DNA

<213> Unknown (H38g477 nucleotide)

<220>

<223> Synthetic construct

<400> 628

atgaatgaga	caaatcattc	ttgggtgaca	gaatttgtgt	tgctgggact	gtctagtcca	60
aggagagctc	aacctttctt	gtttcttata	ttttcactac	tttatctagc	aattctgttg	120
ggcaactttc	tcatcatcct	cactgtgacc	tcagattccc	gccttcacac	ccccatgtac	180
tttctgcttg	ccaacctgtc	atcttatagac	gtatgtgttg	cctcttctgc	tacctctaaa	240
atgattgcag	actttctggt	tgagcacaag	actatttctt	ttgatgcccg	cctggcccag	300
atcttctttg	ttcatctctt	cactggcagt	gaaatgggtg	tcctagtttc	catggcctat	360
gaccgttatg	ttgctatatg	caaacctccc	cactacatga	caatcatgag	ctgctgtgta	420
tgtgttgtgc	tcttctctcat	ttcctgggtt	gtgggcttca	tccataccac	cagccagttg	480
gcattcactg	ttaatctgcc	atcttgtggg	cctaataagg	tagatagttt	ttttctgtga	540
ccttctctta	gtgaccaagt	tagcctgcat	agacacttat	gttgtcagcc	tactaatagt	600
tgacagatagt	ggctttcttt	ctctgagttc	ctttctcttc	ttggttgtct	cctacactgt	660
aatacttggt	acagtttagga	atagctcctc	tgtaagcatg	gtgaaggcct	gtccacatt	720
gactgctcac	atcactgtgg	tcactttatt	ctttggaccg	tgtattttca	tctatgtgtg	780
gcccttcagc	agttactcag	ttgacaaagt	ccttgctgta	ttctacacca	tcttcacgtc	840
tatttttaaac	cctgtaatct	acatgctaag	aaacaaagaa	gtgaaggcag	ctatgtcaaa	900
actgaagagt	cggtatcaga	agcttgggtc	ggtttctgta	gtcataagaa	acgttctttt	960
cctagaaa						967

<210> 629

<211> 942

<212> DNA

<213> Unknown (H38g478 nucleotide)

<220>

<223> Synthetic construct

<400> 629

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cctgaactcc	agatattctt	ttttgtggtg	ttttctgtct	tctatttaat	gaccatgttg	120
ggcaactgcc	tgattttact	cactgtccta	tcacactcac	accttcactc	tcgcacgtac	180
ttcctgctca	gcaacctgtc	tcattgacat	gtgectgtcc	tcctttgcca	caccaaagat	240
gattatggac	ttttttgtct	tgcgtaagac	catctctttt	gaaggctgca	tttctcagat	300
ctttttttta	cacctcttca	atgggactga	gattgtgctg	ctgatctcca	tgtcttttga	360
caggtatatt	gccatagtga	aacctctccg	ctattcaaca	attatgagcc	aaagagtgtg	420
tgttgagctt	gtggcagttt	cttgttggac	agtgggcttt	ctacatacaa	tgagccaatt	480
agtttttccc	tctatttgcc	cttctgtgtt	cccaatgttg	tagacagttt	tttctgtgat	540
cttcttttgg	tcattccagt	agcttgtata	gatatttatg	ttcttgggac	ctccatgatt	600
tcaaccagtg	gtgtgactgc	tcttacaagt	tttctgcttt	tgtctacctc	ctacatcatt	660
gttcttaata	ctatcagggg	ctactcctcc	acaggatcct	ccaaggctct	ttctactctg	720
acagcacatt	ttattgttgt	gttaatgttc	tttgggcccc	gtattttcat	ttatgtgtgg	780
ccttccacaa	acttctgtgt	agacaaaatt	ctctctgttt	tctataccat	cttcactccc	840
tttctgaatc	cacttatcta	tactttgaga	aaccaggaag	tgaagacagc	aatgaagaag	900
aaactgaata	ttcagtattt	cagtcttggg	aaaactgtct	cg		942

<210> 630

<211> 595

<212> DNA

<213> Unknown (H38g479 nucleotide)

<220>

<223> Synthetic construct

<400> 630

atgaacccgt	gtttgtgtgg	cttttagagtt	gtgggtgtctt	ttttttttca	cagtctttta	60
ggcgcacagg	tgcacaactt	gagcgcttca	caaatgacgt	gtttcgagta	tgtggaaatt	120
cataatttct	tgtgtgccct	ttctcaactc	ccccatcggt	catgggtgtga	cactttcccc	180
aataacataa	tcgtgtattt	tcctgtctgcc	atatttgggt	ttcttcccat	cgcggggacc	240
ccttttctct	taatatgaaa	gtgtttcctc	cattgagagg	gtttcatcat	aagggtggaga	300
gtataaggct	ttccccacgt	gtgggtctca	cctctcagtc	gtttgtctgat	tatatggcac	360
aggcggttga	gggcacctca	gttcagatgt	gtcatctctcc	ccgagaaagt	ctgcggtggc	420
ctcagtgatg	tacactgtgg	tcacccccat	gctgaaccct	ttcatctaca	gcatgagaaa	480
cagggatact	aaaagtgtcc	tgcggcgggc	gcacggcagc	acggtgtaat	tttgatatct	540
tcttatctgt	cccatctcct	ttgtagtggt	gggttaaaaaa	ggcagaaagg	tcaaa	595

<210> 631

<211> 942

<212> DNA

<213> Unknown (H38g480 nucleotide)

<220>

<223> Synthetic construct

<400> 631

atgctgggtc	tcaatggcac	ccccttccag	ccagcaacac	tccagctgac	aggcattctt	60
gggatacaaa	caggcctcac	ctgggttgcc	ctgattttct	gcatectcta	catgatctcc	120
attgtaggta	acctcagcat	tctcactctg	gtgttttggg	agcctgctct	gcatcagccc	180
atgtactact	tcctctctat	gtctgctctc	aatgatctgg	gagtgtcctt	ttctacactt	240
cccactgtga	tttctacttt	ctgcttcaac	tacaaccatg	ttgcgtttaa	tgtctgcctg	300
gtccagatgt	tcttcatcca	cactttctcc	ttcatggagt	caggcatact	gctggccatg	360
agcttggatc	gctttgtggc	tatttgttat	ccattacgct	atgtcactgt	gctcactcac	420
aaccgtatat	tggctatggg	tctgggcac	cttaccaga	gtttcaccac	tctcttccct	480
ttcccttttg	tgggtgaaacg	actgcccttc	tgcaaaggca	atgttttgca	tcactcctac	540
tgtctccatc	cagatctcat	gaaagtagca	tgtggagaca	tccatgttaa	caacatttat	600

gggctcttgg	tgatcatttt	tacctatggt	atggactcaa	ctttcaccct	gctttccctac	660
gcattgatcc	tgagagccat	gctgggtcatc	atatcccagg	aacagcgggt	caaggcactc	720
aacacctgca	tgtcacacat	ctgtgcagtg	ctggcccttt	atgtgcccac	aattgctgtc	780
tccatgattc	accgcttctg	gaaaagtgtc	ccacctgttg	ttcatgtcat	gatgtccaat	840
gtctacctgt	ttgtaccacc	catgctcaac	cctatcatct	acagtgtgaa	aaccaaggag	900
atccgcaaag	ggattctcaa	gttcttccat	aaatcccagg	cc		942

<210> 632

<211> 936

<212> DNA

<213> Unknown (H38g481 nucleotide)

<220>

<223> Synthetic construct

<400> 632

atgggggttg	tcaatgtcac	tcacctgca	ttcttctctc	tgactgggtat	ccctgggtctg	60
gagagctctc	actcctgggt	gtcagggccc	ctctgcgtga	tgtatgctgt	ggcccttggg	120
ggaaatacag	tgatcctgca	ggctgtgcca	gtggagccca	gcctccatga	gcccattgtac	180
tacttctctg	ccatgttggt	cttcagtgt	gtggccatat	ccatggccac	actgcccact	240
gtactccgaa	ccttctgcct	caatgcccgc	aacatcactt	ttgatgcctg	tctaattcag	300
atgtttctta	ttcacttctt	ctccatgatg	gaatcaggta	ttctgctggc	catgagtttt	360
gaccgctatg	tggccatttg	tgaccccttg	cgctatgcaa	ctgtgctcac	caactgaagtc	420
attgctgcaa	tgggttttagg	tgcagctgct	cgaagcttca	tcaccctttt	ccctcttccc	480
tttcttatta	agaggctgcc	tatctgcaga	tccaatgttc	tttctcactc	ctactgcctg	540
caccagagaca	tgatgagggt	tgctgtgct	gatatcagta	tcaacagcat	ctatggactc	600
tttgttcttg	tatccacctt	tggcatggac	ctgtttttta	tcttctcttc	ctatgtgctc	660
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tgtgtgtcac	atatcctggc	tgtacttgca	ttttatgtgc	caatgattgg	ggctctccaca	780
gtgcaccgct	ttgggaagca	tgtcccatgc	tacatacatg	tcctcatgtc	aaatgtgtac	840
ctatttgtgc	ctctgtgtgt	caaccctctc	atttatagcg	ccaagacaaa	ggaaatccgc	900
cgagccattt	tccgcatggt	tcaccacatc	aaaata			936

<210> 633

<211> 467

<212> DNA

<213> Unknown (H38g482 nucleotide)

<220>

<223> Synthetic construct

<221> misc_feature

<222> (1)...(467)

<223> n = A,T,C or G

<400> 633

atggaaagca	atcagacctg	gatcacagaa	gtcatcctgt	tgggattcca	ggtgggacca	60
gctctggagt	tgttcctctt	tgggtttttc	ttgctattct	acagcttaac	cctgatggga	120
aatgggatta	tcctgggggt	catctacttg	gactctagac	tgacacacac	catgtatgtc	180
ttcctgtcac	acctggccat	tgtggacatg	tcctatgcct	cgagtactgt	ccctaagatg	240
ctagcaaate	ttgtgatgca	caaaaaagtc	atctcctttg	ctccttgcac	acttcagact	300
tttttgtatt	tggcgtttgc	tattacagag	tgtctgattt	tggatgatgat	gtgctatgat	360
cggtatgtgg	caatctgtca	cccccttgca	atacaccnt	cattatgaac	tggagagtgt	420
gcactgtcct	ggcctcaact	tgctggatat	ttagctttct	cttggct		467

<210> 634

<211> 988

<212> DNA

<213> Unknown (H38g483 nucleotide)

<220>

<223> Synthetic construct

<221> misc_feature

<222> (1)...(988)

<223> n = A,T,C or G

<400> 634

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gcactggcga	ttctcatctn	gtgaactctt	ctctgtcttc	tataactca	ccctgctggg	120
gaatggggtc	atctttggga	ttatctgcct	ggactctaag	cttcacacac	ccatgtactt	180
cttcctetca	cacctggcca	tcattgacat	gtcctatgct	tccaacaatg	ttcccaagat	240
gttggcaaac	ctaataaacc	agaaaagaac	catctccttt	gttccatgca	taatgcagac	300
ttttttgtat	ttggcttttg	ctgttacaga	gtgcctgatt	ttgggtggtga	tgtcctatga	360
taggtatgtg	gccatctgcc	accctttcca	gtacactgtc	atcatgagct	ggagagtgtg	420
cacgatcctg	gttctcacgt	cctggtcacg	tgggtttgac	ctgtccctgg	tacatgaaat	480
tctccttcta	aggttgccct	tctgtgggac	ccgggatgtg	aaccacctct	tctgtgaaat	540
tctatctgtc	ctcaagctgg	cctgtgctga	cacctggggt	aaccaagtgg	tcatatttgc	600
tacctgtgtg	tttgtcttag	tgggacctct	ttccttgatt	ctgggtctct	acatgcacat	660
cctcggggcc	atcctgaaga	tccagacaaa	ggagggccgc	ataaaggcct	tctccacctg	720
ctcctccac	ctgtgtgtgg	ttggactatt	ctttggcata	gccatggtgg	tttacatggt	780
cccagactct	aatcaacgag	aggagcagga	gaaaatgctg	tccctgtttc	acagtgtctt	840
gaaccacaatg	ctgaacccc	tgatctacag	cctgaggaat	gtcagttga	agggcgccct	900
ccacagagca	ctccagagga	agaggtccat	gagaacggtg	tatgggcttt	gcctttaaaa	960
catgtggttt	gctgaagcaa	gaattttg				988

<210> 635

<211> 941

<212> DNA

<213> Unknown (H38g484 nucleotide)

<220>

<223> Synthetic construct

<400> 635

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gagatggaag	tgctcctctt	ttagatcttc	tccctgttat	acatcttcag	cctgctggca	120
aatggcatga	tcttgggact	catctgtctg	gaccacattc	tgctacccc	catgtacttc	180
ttcctctcac	acctggccat	cattgacatg	tcctatgctt	ccaacaatgt	tcccaagatg	240
ttggcaaatc	tgatgaacaa	gaaaagaacc	atctcctttc	ttccatgcat	aatgcagacc	300
tattttgtatt	tctcttttgc	tgctacagag	tgtctgattt	tgggtggtgat	gtcctatgat	360
aggtatgtgg	ccatttgcca	ccctctccag	tacactgtca	tcatgagctg	gagagtgtgc	420
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tcctctggcc	atcctaaaga	tccagacaaa	ggaagccgca	taaaggcctt	ctcgacctgc	720
tcctcccacc	tgtgtgtggt	tggactcttc	ttgtggcata	gccactgggtg	gtttacatag	780
tcccagactc	taatcaacga	gaggagcagg	agaaaatgct	gtccctgttt	cacagtgtct	840
tgaacccaat	tctgaacccc	ctgatctaca	gtctgaggaa	tgctcaggtg	aagggcgccc	900
tccacagagc	actgcagagg	acgctgtcta	tgtaaggagt	g		941

<210> 636

<211> 1002

<212> DNA

<213> Unknown (H38g485 nucleotide)

<220>

<223> Synthetic construct

<400> 636

atgtgttata	tttctcagct	atgcctcagc	cttgggggaac	acactttaca	tatggggatg	60
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gtgagacata	ccaatgagag	caacctagca	ggtttcatcc	ttttaggggt	ttctgattat	120
cctcagttac	agaagggttct	atattgtgctc	atattgattc	tgtattttact	aactattttg	180
gggaatacca	ccatcattct	ggtttctcgt	ctggaaccca	agcttcatat	gccgatgtat	240
ttcttccctt	ctcatctctc	cttctgttac	cgctgcttca	ccagcagtg	tattccccag	300
ctcctggtaa	acctgtggga	acccatgaaa	actatcgct	atgggtggctg	tttggttcac	360
ctttacaact	cccatgccct	gggatccact	gagtgcgtcc	tcccggctgt	gatgtcctgt	420
gaccgctatg	tggctgtctg	ccgtcctctc	cattacactg	tcttaatgca	tatccatctc	480
tgcattggcct	tggcatctat	ggcatggctc	agtgggaatag	ccaccaccct	ggtacagtcc	540
acctcacc	tgcagctgcc	cttctgtggg	catcgccaag	tggatcattt	catctgcgag	600
gtccctgtgc	tcataagct	ggcttgtgtg	ggcaccacgt	ttaacgaggc	tgagcttttt	660
gtggctagta	tccttttctc	tatagtgcct	gtctcattca	tcctgggtctc	ctctgggtac	720
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cagccagcca	agagtagatc	cagggaccag	ggcaagtttg	tttctctctt	ctacactgtg	900
gtaacccgca	tgcttaaccc	tcttatttat	accttgagga	tcaaggaggt	gaaaggggca	960
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<210> 637

<211> 510

<212> DNA

<213> Unknown (H38g486 nucleotide)

<220>

<223> Synthetic construct

<400> 637

atggaaggca	acaagacatg	gatcacagac	atcaccttgc	cgcgattcca	ggttgggtcca	60
gcactggaga	ttctcctctg	tggacttttc	tctgccttct	atacactcac	cctgctgggg	120
aatgggggtca	tctttgggat	tatctgcctg	gactgtgaagc	ttcacacacc	catgtacttc	180
ttcctctcac	acctggccat	tgttgacata	tcctatgctt	ccaactatgt	ccccaagatg	240
ctgacgaatc	ttatgaacca	ggaaagcacc	atctcctttt	ttccatgcat	aatgcagaca	300
ttcttgtatt	tggcttttgc	tcacgtagag	tgtctgattt	tgggtgggtgat	gtcctatgat	360
cgctatgcgg	acatctgcca	ccccttacgt	tacaatatcc	tcattgagctg	gagagtgtgc	420
actgtcctgg	ctgtggcttc	ctgggtgttc	agcttcctcc	tgggtctgggt	cccgtttagt	480
tctcagtcgc	tgaggtgcat	gaacgtactg				510

<210> 638

<211> 924

<212> DNA

<213> Unknown (H38g487 nucleotide)

<220>

<223> Synthetic construct

<400> 638

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caaaactcttc	agctctctct	ctttatgctt	tttctgggtga	tgtacatcct	cacagttagt	120
ggtaatgtgg	ctatcttgat	gttgggtgagc	acctcccatc	agttgcatac	ccccatgtac	180
ttctttctga	gcaacctctc	cttctgggag	atltgggtata	ccacagcagc	agtgcccaaa	240
gcactggcca	tcctactggg	gagaagtcag	accatatcat	ttacaagctg	tcttttgtag	300
atgtactttg	ttttctcatt	aggctgcaca	gagtacttcc	tcctggcagc	catggcttat	360
gaccgctgtc	ttgccatctg	ctatccttta	cactacggag	ccatcatgag	tagcctgtct	420
tcagcgacag	tggccctggg	ctcctgggtg	tgtgggttctg	tggccattgc	agtgccaca	480
gccctcatca	gtggcctgtc	cttctgtggc	ccccgtgcca	tcaaccactt	cttctgtgac	540
attgcaccct	ggattgccct	ggcctgcacc	aacacacagg	cagtagagct	tgtggccttt	600
gtgattgtctg	ttgtgggttat	cctgagttca	tgcctcatca	cctttgtctc	ctatgtgtac	660
atcatcagca	ccatcctcag	gatccctct	gccagtggcc	ggagcaaagc	cttctccacg	720
tgtcctctgc	atctcaccgt	ggtgtctcatt	tgggtatgggt	ccacagtttt	ccttcacgtc	780
cgcacctcta	tcaaagatgc	cttggatctg	atcaaagctg	tccacgtcct	gaacactgtg	840
gtgactccag	ttttaaaccc	cttcatctat	acgtctccta	ataaggaagt	aagagagact	900
ctgctgaaga	aatggaaggg	aaaa				924

<210> 639
 <211> 669
 <212> DNA
 <213> Unknown (H38g488 nucleotide)

<220>
 <223> Synthetic construct

<400> 639
 aaagaaatgg gatgtcacca atcaatgggc acagaattca tcttggtggg attccagctc 60
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 atctgtctgg accacagtct gcacactctc atacttcttc ctctcacacc tggccgcatc 180
 tgacatggcc tatgcttcca acaatgttcc caagatgctg gtggatcttg caaactagaa 240
 aagcaccatg tgcttttttc catgcataat gcagacattc ttgtatttgg cttttgctca 300
 catagagtgt ctgattttgg tggttttgtc ctatgatcgc tatgtggcca tctgccaccc 360
 cttacgttac aatgtctcca tgagctggag agagtgcact gtccctggctg tggcttccctg 420
 ggtgttcagc ttcctcctgg ctctggtcca tttagttctc attctgaggc tgcccttcag 480
 tgggctcatg aaatcaacca ctactgtgaa atcctgtctg tcccaagtt ggctgtgct 540
 gacacctggc tcaaccaggt ggtcatcttt gcaagctgca tgttcacctt ggtaggggtga 600
 ctctgcctgg tgctgggtctc ttacttgggc atctggcggc atctgagatc agttgcgaag 660
 ccaaaaagg 669

<210> 640
 <211> 927
 <212> DNA
 <213> Unknown (H38g489 nucleotide)

<220>
 <223> Synthetic construct

<400> 640
 atgggattgg gcaatgagag ttccctaattg gatttcatcc ttctaggctt ctcagaccac 60
 cctcgtctgg aggtgttctt ctttgtattt gtctttttct tctacctctt gacccttgtg 120
 ggaaacttca ccataatcat catctcatat ctggatcccc ctcttcatac cccaatgtac 180
 ttttttctca gcaacctctc tttactggac atctgcttca ctactagcct tgctcctcag 240
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 ctctatattt ctctggcact gggctccact gaatgtatcc tcttggtga catggccttg 360
 gatcggtaaa ttgctgtctg caaacccctc cactatgtag tcatcatgaa cccacggctt 420
 tgccaacagc tggcatctat ctctggctc agtggttttg ctagtccctt aatccatgca 480
 acttttacct tgcaattgac tctctgtggc aaccataggc tggaccattt tatttgcgaa 540
 gtaccagctc ttctcaagtt ggcttgtgtg gacaccactg tcaatgaatt ggtgcttttt 600
 gttgttagtg ttctgtttgt tgtcattcca ccagcactca tctccatctc ctatggcttc 660
 ataactcaag ctgtgctgag gatcaaatca gtagaggcaa ggcacaaagc cttcagcacc 720
 tgctcctccc accttacagt ggtgattata ttctatggca ccataatcta cgtgtacctg 780
 caacctagt acagctatgc ccaggaccaa gggaagttaa tctccctctt ctacaccatg 840
 gtgaccccca ctttaaattc tatcatctat actttaagga acaaggatat gaaagaggct 900
 ctgaggaaac ttctctcggg aaaattg 927

<210> 641
 <211> 1012
 <212> DNA
 <213> Unknown (H38g490 nucleotide)

<220>
 <223> Synthetic construct

<400> 641
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 atccagaacg gcagccgggc ctactgggc tgttctgtc catgtgcctg gtcattggtg 120
 tggggaacct gctcatcacc ctggccatca gccctgactc ccacctccac atccccatgt 180

acttcttcct	ctccaacctg	tccttgccctg	acatcggttt	cacctccacc	acgggtcccca	240
agatgattgt	ggacatccag	tctcacagca	gagtcattct	ctatgcaggc	tgcctgactc	300
agatgtctct	ctttgccatt	tttggaggca	tgggaagagag	acatgctcct	gagtgtgatg	360
gcctatgacc	ggtttgtagc	catctgtcac	cctctatata	attcagccat	catgaacctg	420
tgtttctgtg	gcttcctagt	tttgttgtct	ttttttttct	gtcctcagtc	ttttagactc	480
ccagctgcac	aacttgattg	ccttacaagt	gacctgcttc	aaggatgtgg	aaattcctaa	540
tttcttctgt	gacccttctc	aactccccc	tcttgcatgt	tgtgacacct	tcaccaataa	600
gataatcatg	tatttccctg	ctgccatatt	tggttttctt	cccattctcag	ggaccctttt	660
ctcttactct	aaaattgttt	cctccattct	gagggtttca	tcatcagggtg	ggaagtataa	720
agccttctcc	acctgtgggt	ctcacctgtc	agttgtttgc	tga'gtttatg	gaacaggcgt	780
tggaggttac	ctcagttcag	atgatgtgtc	atcttcccc	agaaagggtg	cagtggcctc	840
agtgatgtac	acgggtggta	cccccatgcc	gaacccttct	atctacagcc	tgagaaacag	900
ggatattaaa	agtgtcctgc	ggcggccgca	cggcagcaca	gtctaattct	aatatcttct	960
tatctgttcc	attccttttg	tagtgtgggt	taaaaaaggc	agaaagggtca	aa	1012

<210> 642

<211> 879

<212> DNA

<213> Unknown (H38g491 nucleotide)

<220>

<223> Synthetic construct

<400> 642

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tacctggcag	ctgtcatagg	aaatctccta	atcatcatac	ttaccactct	ggatgttcac	120
ctccaaaccc	caatgtattt	ctttttgaga	aacttgtctt	tcttagattt	ttgttacatc	180
tctgtcacaa	ttccaaaatc	tattgttagt	tccttgactc	atgatacttc	catttctttc	240
tttgggtgtg	ctctgcaagc	cttctttttc	atggacttgg	caactacgga	ggtagccatc	300
cttcacagtga	tgtcctatga	ccgctatatg	gccatctgcc	ggcctttaca	ttatgagggtc	360
atcataaac	aaggtgtctg	tctgaggatg	atggccatgt	cgtggctcag	tggggtgatc	420
tgtggattca	tgcagtgtat	agcaacattc	tcattaccat	tctgtgggcg	caatagaata	480
cgtcaatttt	tctgtaatat	tccacagctc	ctaagcctct	tagaccccaa	agtaattacc	540
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actctctcct	acatgtacat	tttttctgtc	atcatgagga	ttccttctaa	ggagggtaga	660
tcaaaaacat	tttctacctg	cattccacat	cttgtgggtg	taacactctt	tatgatattc	720
ggcagcattg	cctatgtgaa	gccaatttca	aattctcccc	ccgttctgga	tgttttctctg	780
tctgcgttct	acacagtcgt	gccccgacc	ctgaaccccg	tcattctatag	tctgaggaat	840
agggacatga	aggcagccct	gagaaggcag	tgtggtccc			879

<210> 643

<211> 1020

<212> DNA

<213> Unknown (H38g492 nucleotide)

<220>

<223> Synthetic construct

<400> 643

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tcttccccc	caagtgtggt	cttcttctta	gacaatttgt	cattttcatt	atgagtgtaa	120
cagaaaatac	gctcatgata	ctcctcattc	gcagtactc	ccgactccac	actccaatgt	180
attttctgct	cagccatctc	tccttaatgg	atatcttgca	tgtttccaac	atcggtccca	240
aaatgggtcac	taactttctg	tcaggcagca	gaactatttc	atttgcagggt	tgtgggttcc	300
aggtattttct	gtccctcacc	ctcctgggtg	gtgagtgcct	tctcctgggt	gcaatgtcct	360
gtgatcgcta	tgtggctatc	tgtcaccgcg	tgcgctatcc	gattcttatg	aaggagtatg	420
ccagcgctct	catggctgga	ggctcctggc	tcattgggggt	tttcaactcc	acagtccaca	480
cagcttatgc	actgcagttt	cccttctgtg	gctctagggc	aattgatcac	ttcttctgtg	540
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gtgtaagtgc	tgtgatcttc	ctgctgatcc	ctttctcctt	gatctctgct	tcttatggcc	660
aaattattct	tactgtcctc	cagatgaaat	catcagaggc	aaggaaaaag	tcattttcca	720

cttgttcctt	ccacatgatt	gtgggtcacga	tgtactatgg	gccatttatt	tttacatata	780
tgagacctaa	atcataccac	actccaggcc	aggataagtt	cctggcaata	ttctatacga	840
tcctcacacc	cacactcaac	cctttcatct	acagctttag	gaataaagat	gttctggcgg	900
tgatgaaaaa	tatgctcaaa	agtaactttc	tgacacaaaa	aatgaatagg	aaaattcctg	960
aatgtgtgtt	ctgtctattt	ctatgttaaa	tgacctgaagg	atactcatga	gaggtttcct	1020

<210> 644

<211> 932

<212> DNA

<213> Unknown (H38g493 nucleotide)

<220>

<223> Synthetic construct

<400> 644

atgaagtggg	caaaccagac	agctgtgacg	gaatacgtcc	tgatggggct	acacgagcac	60
tgtaacctgg	aggtggctct	gtttgtgttc	tgacctgggca	tctactccgt	gaatgtgttg	120
gggaacgccc	tcctcatagg	gctgaacgtg	ctgcaccctc	gcctgcacaa	ccccatgtac	180
ttctcagcaa	cctctccctc	atggacatct	gcggcacctc	ctcctttgtg	cctctcatgc	240
tagacaattt	cctggaaaacc	cagaggacca	tttccctccc	tggtgtgtgc	ctgcagatgt	300
acctgacctt	ggcgtgtgga	tcaacggagt	gcctgtgtgt	ggctgtgatg	gcatatgacc	360
gttatgtggc	tatctgccag	ccgcttaggt	acccagagct	catgagtggg	cagacctgca	420
tgcatatggc	agcgctgagc	tgggggacag	gctttgccaa	ctcactgcta	cagtccatcc	480
ttgtctggca	cctccccctt	tgtggccacg	tcatcaacta	cttctatgag	atcttggcag	540
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ccgtccctgac	actggccccc	ctcttgcctc	tctgcctgtc	ttaccttttc	atcctgtctg	660
ccatcccttag	ggtacctctt	gctgcaggcc	ggtgcaaagc	cttctccacc	tgctcagccc	720
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ccaaggatcc	caacgtggat	aagactgtcg	cattgttcta	cggggttgtg	acgccctcgc	840
tgaaccccat	cattttacag	ctgaggaatg	cagaggtgaa	agctgccgtc	ctaactctgc	900
tgagaggagg	tttgcctctc	aggaaagcat	cc			932

<210> 645

<211> 957

<212> DNA

<213> Unknown (H38g494 nucleotide)

<220>

<223> Synthetic construct

<400> 645

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cgacctcac	tagaaactgt	cctcttcata	gttgtcttga	gtttttacat	ggtatcgatc	120
ttgggcaatg	gcatcatcat	tctggtctcc	catacagatg	tgacacctca	cacacctatg	180
tactttcttc	ttgccaacct	ccccctcctg	gacatgagct	tcaccacgag	cattgtccca	240
cagctcctgg	ctaacctctg	gggaccacag	aaaaccataa	gctatggagg	gtgtgtgggtc	300
cagttctata	tctcccattg	gctgggggca	accgagtgtg	tcctgctggc	cacctgtcc	360
tatgaccgct	acgctgccat	ctgcaggcca	ctccattaca	ctgtcattat	gcatccacag	420
ctttgccttg	ggctagcttt	ggcctcctgg	ctgggggggtc	tgaccaccag	catggtgggc	480
tccaagctca	ccatgctcct	accgctgtgt	gggaacaatt	gcatcgacca	cttcttttgc	540
gagatgcccc	tcattatgca	actggcttgt	gtggatacca	gcctcaatga	gatggagatg	600
tacctggcca	gctttgtctt	tgttgtcctg	cctctggggc	tcactcctgt	ctcttacggc	660
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ctccagccag	ccaagagcac	ctcccatgag	cagggcaagt	tcatagctct	gttctacacc	840
gtagtcactc	ctgcgctgaa	cccacttatt	tacaccctga	ggaacacgga	ggtgaagagc	900
gcctcccggc	acatggtatt	agagaactgc	tgtggctctg	caggcaagct	ggcgcaa	957

<210> 646

<211> 792

<212> DNA

<213> Unknown (H38g495 nucleotide)

<220>

<223> Synthetic construct

<400> 646

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attcactggg	accaccggtt	ccacacgccc	atgtacttcc	tcctgagcca	actttccctc	120
atggacgtga	tgctggtttc	caccactgtg	cccaaaatgg	cggtgacta	cttgaccgga	180
agtaaggcca	tctcccgcgc	tggctgtggt	gcgcagatct	tcttccctcc	cacactgggt	240
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tggctcctgg	gtgcagctga	cgggctcctg	caggtgtgtg	ctaccctgag	cttcccatat	420
tgcggtgcac	acgagatcga	tcacttcttc	tgcgagaccc	ccgtgctggg	gcgtttggct	480
tgtgctgaca	cttcagtcct	cgaaaacgcc	atgtacatct	gctgtgtgtt	aatgctcctg	540
gtcccccttt	ccctcatcct	gtcctcctat	ggtctcatcc	tcgtgtgtgt	tctgcacatg	600
cgctctacag	aagcccgcga	gaaggccttt	gccacctgct	cttcacatgt	ggctgtgggt	660
ggactctttt	atggagctgc	cattttttacc	tatatgagac	ccaaatccca	caggtccact	720
aaccacgaca	aggttggtgc	agccttctat	actatgttca	cccctttact	aaacccctc	780
atctacagtg	tg					792

<210> 647

<211> 662

<212> DNA

<213> Unknown (H38g496 nucleotide)

<220>

<223> Synthetic construct

<400> 647

aatctgtctt	tcttagatct	ctgctttaca	gcaagcattg	cccctcagct	gctgtggaac	60
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atgatgctgg	gtccaccga	gtgcgtcctc	ctggttgtca	tgtcccatga	ccgctatgtg	180
gccgtctgcc	ggctccctgca	ctacatggca	gtcatgcgcc	cacatctctg	cctgcagctg	240
gtgactgtgg	cctgggtgctg	tggcttctca	aactccttca	tcagtgttcc	tcagacgatg	300
cagctctccc	ggtgtggacg	tcgcaggggtg	gaccacttcc	tgtgtgagat	gcctgtctct	360
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ggtgctgagg	atgaagtcag	cagcagggcg	aaagaaagcc	ttccacacct	gctcttctca	540
cctcacagtg	gtctctctct	tctacggaac	catcatctac	ggtgtacctg	aagccggcca	600
acagctactc	ccaagatcag	gggaagttcc	tgactctctt	ctacaccatc	gtcattccca	660
gc						662

<210> 648

<211> 936

<212> DNA

<213> Unknown (H38g497 nucleotide)

<220>

<223> Synthetic construct

<400> 648

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ccagccctgg	agcatctgct	cttccctctg	tgtcagcca	tgtacctggg	gacctcctg	120
gggaacacag	ccatcatggc	ggtgagcgtg	ctagatatcc	acctgcacac	gcccggttac	180
ttcttctctg	gcaacctctc	taccctggac	atctgtctaca	cgccccacct	tgtgcctctg	240
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atgtgtctga	gcctgtccac	gggtccacg	gagtgcctgc	tactggccat	cacggcctat	360
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tgcgtgctgc	tgatgggagc	tgcttgggtc	ctctgcctcc	tcaagtcggg	gactgagatg	480
gtcatctcca	tgaggctgcc	cttctgtggc	caccacgtgg	tcagtcactt	cacctgcaag	540

atcctggcag	tgctgaagct	ggcatgcggc	aacacgtcgg	tcagcgaaga	cttctgtctg	600
gcgggctcca	tctgtctgct	gcctgtaccc	ctggcattca	tctgcctgtc	ctacttgctc	660
atcctggcca	ccatcctgag	gggtgccctcg	gccgccaggt	gctgcaaagc	cttctccacc	720
tgcttggcac	acctggctgt	agtgtctgctt	ttctacggca	ccatcatctt	catgtacttg	780
aagcccaaga	gtaaggaagc	ccacatctct	gatgaggtct	tcacagtcct	ctatgccatg	840
gtcacgacca	tgctgaaccc	caccatctac	agcctgagga	acaaggaggt	gaaggaggcc	900
gccaggaagg	tgtggggcag	gagtcggggc	tccagg			936

<210> 649

<211> 940

<212> DNA

<213> Unknown (H38g498 nucleotide)

<220>

<223> Synthetic construct

<400> 649

atggaaagg	gaaattggac	attggtgact	gagttttatc	ttgtggggat	accaaccacc	60
agagcccttg	ggggcctcct	ctttgtgatt	ttttatcagc	ctatttggtg	acagtccttg	120
gaaacaccct	tattattatc	ctgattcttg	tggattacag	gctccactca	cccatgtatt	180
tcttctcag	caatctctct	ttcagtgaaa	cattaaccat	aacctgtgct	gttcctaaga	240
tgctggagg	cttcccgtcg	gaaaggaaga	gcatacacaag	tggcgaatgc	tctgcacagt	300
cctatttcta	ttttctttcc	ggatgcactg	agttttattcc	ttttgctgtc	atgtcctatg	360
accgctatgt	ggccatttgc	agtcctcttc	agtaccctgc	aattatgacc	agtcactctt	420
gtgcccacct	cgctcatctc	tcctgggtgg	gtggctttct	cctcatgctc	ccatccacca	480
tcctcaaggc	aggactgcc	caactgtggtc	ccaacgtgat	tgagcacttt	ttctgtgaca	540
gcgcccctct	cctccacctg	gcctgtgctg	acattcgtgc	tattgagctg	ttggactttc	600
tcagctcact	ggtcctgatc	ctcagctccc	tctcactcac	agtggctctc	tatgtttaca	660
tcattctccac	cattctgaag	ataccctcag	gccaagggtca	acgcaaagcc	tttgccacct	720
gtgcctctca	cttcacggtg	gtctccgtgg	gctatgggat	ctccatcttt	gtctatgttc	780
acccctcaca	gaagagcagc	ctgcacctca	acaagatcct	ctttatcctc	tccagcatca	840
tcacacccct	cctgaatccc	ttcgtcttca	gtctgtggaa	tgaaccctatg	aaagatgcac	900
tgaaggacgc	ctcggccgga	ggacagagct	tgctcaaagg			940

<210> 650

<211> 927

<212> DNA

<213> Unknown (H38g499 nucleotide)

<220>

<223> Synthetic construct

<400> 650

atggcaaatac	tcacaatcgt	gactgaattt	atccttatgg	ggttttctac	caataaaaat	60
atgtgcattt	tgcattcgat	tctcttcttg	ttgatttatt	tgtgtgccct	gatggggaat	120
gtcctcatta	tcatgatcac	aactttggac	catcatctcc	acacccccgt	gtatttcttc	180
ttgaagaatc	tatctttctt	ggatctctgc	cttattttcag	tcacggctcc	caaactctatc	240
gccaatctct	tgatacaca	caactccatt	tcattccttg	gctgtgtttc	ccaggtcttt	300
ttgttgcttt	cttcagcatc	tgacagagctg	ctcctcctca	cgggtgatgtc	ctttgaccgc	360
tatactgcta	tatgtcacc	tctgcactat	gatgtcatca	tggacaggag	cacctgtgtc	420
caaagagcca	ctgtgtcttg	gctgtatggg	gggtctgattg	ctgtgatgca	cacagctggc	480
accttctcct	tatcctactg	tgggtccaac	atgggtccatc	agttcttctg	tgacattccc	540
cagttattag	ctatttcttg	ctcagaaaat	ttaataagag	aaattgcact	catccttatt	600
aatgtagttt	tggatttctg	ctgttttatt	gtcatcatca	ttacctatgt	ccacgtcttc	660
tctacagtca	agaagatccc	ttccacagaa	ggccagtcac	aagcctactc	tatttgccctt	720
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ttgataaagg	gaaagctcac	caaaaag				927

<210> 651

<211> 942
 <212> DNA
 <213> Unknown (H38g500 nucleotide)

<220>
 <223> Synthetic construct

<400> 651
 atgggggatg tgaatcagtc ggtggcctca gacttcattc tgggtgggcct cttcagtcac 60
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 ggcaacaccg ttcttctctt cttgatccgt gtggactccc ggctccacac acccatgtac 180
 ttctgtctca gccagctctc cctgtttgac attggctgtc ccatgggtcac catccccaag 240
 atggcatcag actttctgcg gggagaaggt gccacctcct atggaggtgg tgcagctcaa 300
 atattcttcc tcacactgat ggggtgtggct gagggcgctc tgttggtcct catgtcttat 360
 gaccgttatg ttgtgtgtg ccagcccctg cagtatcctg tacttatgag acgccaggta 420
 tgtctgtctga tgatgggctc ctccctgggtg gtagggtgtc tcaacgcctc catccagacc 480
 tccatcaccc tgcattttcc ctactgtgcc tcccgatttg tggatcactt cttctgtgag 540
 gtgccagccc tactgaagct ctccctgtgca gatacctgtg cctacgagat ggcgctgtcc 600
 acctcagggg tgetgatcct aatgctccct ctttccctca tgcgccacct ctagggccac 660
 gtgttgccagg ctgtttctaag catgcgctca gaggaggcca gacacaaggc tgtcaccacc 720
 tgctcctcgc acatcacggg agtggggctc ttttatgggt cgcgcgtgtt catgtacatg 780
 gtgccttgcg cctaccacag tccacagcag gataacgtgg tttccctctt ctatagcctt 840
 gtcaccctta cactcaaccc ccttatctac agtctgagga atccggagggt gtggatggct 900
 ttgggtcaaag tgcttagcag agctggactc aggcaaatgt gc 942

<210> 652
 <211> 936
 <212> DNA
 <213> Unknown (H38g501 nucleotide)

<220>
 <223> Synthetic construct

<400> 652
 atggatctta aaaatggatc tctagtgacc gagtttattt tactaggatt ttttggacga 60
 tgggaacttc aaattttctt ctttgtgaca ttttccctga tctacgggtg tactgtgatg 120
 ggaaacattc tcattatggg cacagtgaca tgtaggtcaa cccttcattc tcccttgtac 180
 ttctccttg gaaatctctc ttttttgac atgtgtctct ccactgccac aacacccaag 240
 atgatcatag atttgctcac tgaccacaag accatctctg tgtggggctg cgtgaccag 300
 atgttcttca tgcacttctt tgggggtgct gagatgactt ttctgataat catggccttt 360
 gacaggtatg tagccatag taaacccctg cactatagga caatcatgag ccacaagctg 420
 ctaaaggggt ttgcgatact ttcatggata attgggtttt tacactccat aagccagata 480
 gttttaacaa tgaacttgcc tttctgtggc cacaatgtca taaacaacat attttgtgat 540
 cttccccttg tgatcaagct tgcttgcat gaaacataca ccctggaatt atttgtcatt 600
 gctgacagcg ggctgctctc tttcacctgt ttcacctct tgcctgttct ttacattgtc 660
 atcctgggtca gtgtaccaa aaaatcatca catgggctct ccaaggcgct gtccacattg 720
 tctgccaca tcattgtggg cactctgttc tttggacct gtatttttat ctatgtttgg 780
 ccattcagta gtttggcaag caataaaact cttgccgtat tttatacagt tatcacacc 840
 ttactgaatc cgagtattta taccctgaga aataagaaaa tgcaagagge cataagaaaa 900
 ttacggttcc aatatgttag ttctgcacag aatttc 936

<210> 653
 <211> 972
 <212> DNA
 <213> Unknown (H38g502 nucleotide)

<220>
 <223> Synthetic construct

<400> 653
 atgccaacag acaaacaaat ggaaaaacaa aatcagttca tgggtgcctga atttattttg 60

ttgggattca	aaaatctcat	gagctacaga	ttttctttat	cttatttttc	cattctctac	120
atatccataa	ttaagtaacc	taatcattat	ctttgtagt	aaactggatc	ctcaattgca	180
ttctcccatg	tacttctctac	tggccaacct	gtcatctact	gatatgcccc	tggcctcctt	240
tgctactcct	aagaaaatcg	ataatgtaat	tagtgaatat	aggaccatct	cctatgaagg	300
ctgcatgaca	tagagatttt	tccttcactt	tttaagtggg	agtgagatgg	ttttactctt	360
agccatggca	atcgatagat	aatttgccat	atgcaaacc	ctccattaca	agtccattgc	420
atcggacttg	ctcctcgctc	ctggactatg	gatttcatgc	acaccatgag	ccaaattgtt	480
ctcacagtga	ctttgcccatt	ctgtgggtctc	agtgttgtgg	atatttttgt	gtgtgtgtga	540
tctgccttgt	gataaaaactt	gcctgtacag	acacttacat	cttgagagcta	tgagtcattg	600
cagacagtgg	actactttct	ttgtctgtgt	tcatgtttct	gttaatctcc	tatagcaccg	660
tcctgattat	tatttgacat	cattcctcca	gggggtcttc	caaaactctg	tccacgcttt	720
cagcccacat	tatgggtggg	gtactgttct	ttggagcttg	catctttacc	tgtgaaagac	780
cattcagcac	tgtctccatt	gatgtctgtg	ttttaacta	tttttgctcc	ccttttaa	840
ccaatcatct	acacattcag	gaataacgac	atgaagaaag	cattaagaaa	aatgaagatt	900
aactttgtga	gttctagatc	aacttgataa	ctaaaatatt	ataatcacta	aaagcatcat	960
cattattgtt	gt					972

<210> 654

<211> 936

<212> DNA

<213> Unknown (H38g503 nucleotide)

<220>

<223> Synthetic construct

<400> 654

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cggaagatcc	agctcctcct	cttcctcttt	ttctcagtgt	tctatgtgtc	aagcctgatg	120
ggaaatctcc	tcattgtgct	aactgtgacc	tctgaccctc	gtttacagtc	ccccatgtac	180
ttcctgctgg	ccaaccttcc	catcatcaat	ttgggtattt	gttccctccac	agctcccaag	240
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atcttcttta	tccatgcagt	tgggggaact	gagatgggtgc	tgctcatagc	catggccttt	360
gaccgatatg	tggccatag	taagcctctc	cactacctga	ccatcatgaa	cccacaaagg	420
tgcattttgt	ttttagtcac	ttcctggatt	ataggtatta	ttcactcagt	gattcagttg	480
gcttttgttg	tagacctgct	gttctgtggc	cctaataaat	tagatagttt	cttttgtgat	540
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gccaatagtg	gatttatttc	tctggcttct	tttttaattc	tcataatctc	ttacatcttt	660
attttgggtga	ctgttcagaa	aaaatcttca	ggtgggtatc	tcaaggcttt	ctctatgtcg	720
tcagctcatg	tcattgtggg	ggttttgggc	tttgggccat	taatcttttt	ctatattttt	780
ccatttccca	catcacatct	tgataaatcc	cttgccatct	ttgatgcagt	tatcactccc	840
gttttgaatc	cagtcacata	tacttttaga	aataaagaga	tgatgggtggc	aatgagaaga	900
cgatgctctc	agtttgtgaa	ttacagtaaa	atcttt			936

<210> 655

<211> 967

<212> DNA

<213> Unknown (H38g504 nucleotide)

<220>

<223> Synthetic construct

<400> 655

atgaataggg	acaaccagtc	tgtgggtgtct	gaattcgtgt	tgctgggact	ctcaaattct	60
tgggagactc	aagatttttc	ttttttgctt	ttcttgtctt	ttctatgtgt	ccggtgtgat	120
ggcaaacctc	attgtagtgg	tcattgtaac	ctctgaccct	tacttgactc	cctccttgta	180
tattttgctg	gccaacctct	ctgtcattga	tctcacattt	tgctccattg	cagcacgcaa	240
gatgatttgt	gatattttca	ggaaacagaa	agtcatttcc	ttttggggct	gtgtagctca	300
gatcttcttt	agccatgctg	ttgggggcat	tgataggtg	ctgctcatag	ccatggcctt	360
tgacagatat	gttgccgtat	gtaagcccct	tcactacctg	accatcatgc	atccaagaat	420
gtgcattttg	attctagtgg	cttcctgggc	cattgggtctc	attcactcat	tgggtccaatt	480
gtcttttgta	gtaaacttgc	ccttctgtgg	ccctaagtgt	ttggacagct	tttactgtga	540

catacctcag	ctcatcaaac	ttgcttgcac	aaatacctat	aaactgcagt	tcatgggttac	600
tgctaatagt	gggttcattt	ccttgagtgc	tttcttcttg	ctcatcctct	cttacatctt	660
cattctggcc	actcttcaga	aacactcctc	aggaggctca	tccaaggctg	tctctactct	720
gtcagctcat	attactgttg	tggtttttat	ccttggtcca	ctgatttttt	tctatgtatg	780
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ttttctgaat	ccagtcctct	acacattcag	gaacagggaa	atgaagattg	caataaggag	900
agtgttcggg	caatttatgg	gttttagaaa	aactacttaa	gtggccttat	taaaacacag	960
aatttcc						967

<210> 656

<211> 873

<212> DNA

<213> Unknown (H38g505 nucleotide)

<220>

<223> Synthetic construct

<400> 656

atggttgggg	caaatacctc	cgtgggtgtca	gagtttgtgt	tcctgggact	caccaatttc	60
tgaggagatc	gacttctcct	ccttggtgtc	tcctccatgt	tttacatggc	cagtatgatg	120
ggaaactctc	tcatttttgc	cactgtgact	tctgacctc	acttgactc	ccccatgtat	180
tttctgttag	ccaacctctc	cttcattgac	ctgggtgttt	cctctgtcac	ttctcccaa	240
atgatttatg	acctgttcag	aaagcacgaa	gtcatctcct	ttggaggctg	catcgctcaa	300
atcttcttca	tcacgtcat	tggcgggtgtg	gagatgggtc	tgctcatagc	catggccttt	360
gacagatatg	tgcccatatg	taagcccctc	cagtacctga	ccattatgag	ccaagaatg	420
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gtttttgtag	taaacttgcc	cttctgtggt	cctaattgat	cggacagctt	ttactgtgac	540
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gccaacagtg	gattcatctc	tctgggctcc	ttcttcatac	tgatcatttc	ctatgtggtc	660
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tcagctcacg	tcagtgtggt	agttttgttc	tttggctcct	tgatttttgt	ctatacgtgg	780
ccatctccct	ccacacacct	ggataagttt	ctggccatct	ttgatgcagt	tctcactcct	840
gttttaaatc	ctatcatcta	cacattcagg	aat			873

<210> 657

<211> 936

<212> DNA

<213> Unknown (H38g506 nucleotide)

<220>

<223> Synthetic construct

<400> 657

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cgggagattc	agcttctact	ttttgttttc	tctttgttgt	tctactttgc	gagcatgatg	120
ggaaaccttg	tcattgtatt	cactgtaacc	atggatgctc	atctgcactc	ccccatgtat	180
ttcctcctgg	ctaacctctc	aatcattgat	atggcatttt	gctcaattac	agcccctaag	240
atgatttgtg	atattttcaa	gaagcacaa	gccatctcct	ttcggggatg	tattactcag	300
atcttcttta	gccatgctct	tgggggcact	gagatgggtc	tgctcatagc	catggccttt	360
gacagataca	tgcccatatg	taaacctctc	cactacctga	ccatcatgag	ccaagaatg	420
tgtctatact	ttttagccac	ttcctctatc	attggcctta	tccactcatt	ggccaatta	480
gtttttgtgg	tagattttacc	tttttgtggt	cctaatatct	ttgacagttt	ttactgtgat	540
ctccctcggc	tcctcagact	tgccctgtacc	aacacccaag	aactggagtt	catgggtcact	600
gtcaatagtg	gactcatttc	tgtgggctcc	tttgtcttgc	tggttaattc	ctacatcttc	660
attctgttca	ctgtttggaa	acattcttct	ggtggtctag	ccaaggccct	ctctaccctg	720
tcagctcatg	tcactgtggt	catcttgttc	tttgggccac	tgatgttttt	ctacacatgg	780
ccttctccca	catcacacct	ggataaatat	cttgctattt	ttgatgcatt	tattactcct	840
tttctgaatc	cagttatcta	cacattcagg	aacaaagaca	tgaaagtggc	aatgaggaga	900
ctgtgcagtc	gtcttgcgca	ttttacaaag	attttg			936

<210> 658

<211> 980

<212> DNA

<213> Unknown (H38g507 nucleotide)

<220>

<223> Synthetic construct

<400> 658

atggagcaaa	ggaaaaatgt	gactgagttt	gtccttgtgg	ggctcactca	gagccccag	60
ggacagaaaa	tattatttct	tgtgttcttg	ctcatctacg	ttgtgacaat	ggtaggcaac	120
atattcattg	ttgtgactgt	ggtggtcagc	ccaactttgg	atgccccatg	tacttcttcc	180
ttggctactt	atcatttatg	gatgctgttc	attctactac	agttacccca	aatatgatta	240
tagacttact	ctatgagaag	aaaaccattt	cgttccaagc	ttgattaccc	agatttttat	300
aggacaccta	tttgggggtg	ctgagatttt	actccttgtt	gtcatggcct	atgatggcta	360
cgtgaccatc	tgcaaaccce	tgcattattt	gaccatcatg	aaccaacggg	tgtgcattct	420
actgctgctg	ttggcctggg	ctggagggtt	cttgcattgt	gtagtccaac	ttctttttgt	480
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tggggcaatc	tgtgtgtgca	tctttatgct	cttactcttc	tcctatgggg	tcattctgca	660
ctccctgaag	aatcttagtc	aggaagggag	gcacaaagcc	ttatccacct	gtggctccca	720
tatcactgtg	gtgatcctct	tctttgtccc	ttgtattttc	atgtatgtga	gacctccttt	780
gaccttaccc	attgataaat	ccttgactgt	gttttacact	gttatcacac	ctatgttgaa	840
ccctctaata	tatactttaa	gaaatgcaga	gatgaaaaat	gctatgaaga	agctctggac	900
tagaaaaaga	aaatgagggtg	gcagacaaat	gtatcatcta	ttttcagtga	agagttgctc	960
cctccaggaa	agccatttgt					980

<210> 659

<211> 917

<212> DNA

<213> Unknown (H38g508 nucleotide)

<220>

<223> Synthetic construct

<400> 659

atgaatctta	aaaatggatc	tctagtgacc	gagtttat	tactaggatt	ttttggacga	60
tgggaacttc	aaattttctt	ctttgtgaca	ttttccctga	tctacgggtg	tactgtgggtg	120
ggaaacattc	tcattatggg	cacagtgcga	tgtagtgcga	cccttcattc	tcccttgtag	180
tttctccttg	gaaatctctc	ttttttggac	atgtgtctct	ccactgccac	aacacccaag	240
atgatcacia	gaccatctct	gtgtgggggt	gcgtgaccca	gaagttcttc	atgcacttct	300
ttggggagtgc	tgagatgact	cttctgataa	tcattggcct	tgacagggtat	gtagccatat	360
gtaaacccct	gcactatagg	acaatcatga	gccacaagct	gctaaagggg	tttgcgatac	420
tttcatggat	aattggtttt	ttacactcca	taagccagat	agttttaaca	atgaacttgc	480
ctttctgtgg	ccacaatgtc	ataaacaaca	tattttgtga	tcttcccttc	gtgatcaagc	540
ttgcttgcat	tgaaacatac	accctggaat	tatttgcatt	tgctgacagc	gggctgtctc	600
ctttcacctg	tttcatcctc	ttgcttggtt	cttacctgtg	catcctgggtc	agtgtaccaa	660
aaaaatcatc	acatgggctc	tccaaggcgc	tgtccacatt	gtctgcccac	atcattgtgg	720
tcactctgtt	ctttggacct	tgtattttta	tctatgtttg	gccattcagt	agtttggcaa	780
gcaataaaac	tcttgctgta	ttttatacag	ttatcacacc	gttactgaat	ccgagtattt	840
ataccctgag	aaataagaaa	atgcaagagg	ccataagaaa	attacgggtc	caatatgtta	900
gttctgcaca	gaatttcc					917

<210> 660

<211> 1008

<212> DNA

<213> Unknown (H38g509 nucleotide)

<220>

<223> Synthetic construct

<400> 660

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atccagaatg	acagccgggc	ctcgctgggc	tggttcctgtc	catgtgcctg	gtcacgggtgc	120
tggggaacct	gctcatcatc	ctggccgtca	gccctgactc	ccacctccac	acccccatgt	180
acatcttctt	ctccaacctg	tccttgcttg	acatcggttt	caacctccacc	acgggtcccca	240
agatgactgt	ggacatccag	tctcacagca	gagtcattctc	ctatgcaggc	tgccctgactc	300
agatgtctct	ctttgccatt	tttggaggca	tggaagagag	acatgttcct	gagtgtgatg	360
gcctatgacc	ggtttgtagc	catctgtcac	cctctatata	attcagccat	catgaacccg	420
tgtttctgtg	gctttctagt	tttgttgtct	tttttttttt	ctctcagtct	tttagacgtc	480
cagctgcgca	acttgattgc	cttacaaatg	acctgcttca	aggatgtgga	aattcctaata	540
ttcttctgtg	acccttctca	actcccccat	cttgcattgt	gtgacacctt	caccaataaac	600
ataatcctgt	atttccttgc	tgccatatct	ggttttcttc	ccatcttggg	gaccttttctc	660
tcttactata	aaatcgtttt	ctccattctg	agggtttcat	catctgggtg	gaagtataag	720
gccttctcca	cctgtgtgtc	tcacctgtca	gtgggttgct	gatttttatgg	aacaggcggt	780
ggaggggtacc	tcagttcaga	tgtgtcatct	tccccgagaa	aggctgcagt	ggcctcagtg	840
atgtacacgg	tggtcacccc	catgctgaac	cccttcatct	acagcctgag	aaacagggat	900
attaaaagtg	tcctgcggcg	gccgcacagc	agcacggtct	aatcttgata	tcttcttatac	960
tgttccattc	ctttttagtag	gtgggttaaa	aaaggcagca	aggtcaaa		1008

<210> 661

<211> 957

<212> DNA

<213> Unknown (H38g510 nucleotide)

<220>

<223> Synthetic construct

<400> 661

atgatggaaa	tagccaatgt	gagttctcca	gaagtctttg	tcctcctggg	cttctccaca	60
cgacctcac	tagaaactgt	cctcttcata	gttgtcttga	gtttttacat	ggtatcgatc	120
ttgggcaatg	gcatcatcat	tctgggtctcc	catacagatg	tgcacctcca	cacacctatg	180
tacttctttc	ttgccaacct	ccccttctctg	gacatgagct	tcaccacgag	cattgtccca	240
cagctcctgg	ctaacctctg	gggaccacag	aaaaccataa	gctatggagg	gtgtgtgggtc	300
cagttctata	tctcccattg	gctgggggca	accgagtgtg	tcctgctggc	caccatgtcc	360
tatgaccgct	acgctgccat	ctgcaggcca	ctccattaca	ctgtcattat	gcatccacag	420
ctttgccttg	ggctagcttt	ggcctcctgg	ctgggggggtc	tgaccaccag	catgggtgggc	480
tccacgctca	ccatgtctct	accgctgtgt	gggaacaatt	gcatcgacca	cttcttttgc	540
gagatgcccc	tcattatgca	actggcttgt	gtggatacca	gcctcaatga	gatggagatg	600
tacctggcca	gctttgtctt	tgttgtctctg	cctctggggc	tcctcctggg	ctcttacggc	660
cacattgccc	gggcccgtgt	gaagatcagg	tcagcagaag	ggcggagaaa	ggcattcaac	720
acctgttctt	cccacgtggc	tgtgggtgtc	ctgtttttacg	ggagcatcat	cttcatgtat	780
ctccagccag	ccaagagcac	ctcccatgag	cagggcaagt	tcatagctct	gttctacacc	840
gtagtcactc	ctgcgctgaa	cccacttatt	tacacctga	ggaacacgga	ggtgaagagc	900
gccctccggc	acatgggtatt	agagaactgc	tgtgggtctg	caggcaagct	ggcgcaa	957

<210> 662

<211> 912

<212> DNA

<213> Unknown (H38g511 nucleotide)

<220>

<223> Synthetic construct

<400> 662

atggaaagag	caaaccattc	agtgggtatcg	gaatttattt	tgttgggact	ttccaaatct	60
caaaatcttc	agatttttatt	cttcttgagg	ttctctgtgg	tcttcgtggg	gattgtgtta	120
ggaaacctgc	tcatcttggt	gactgtgacc	tttgattcgc	tccttcacac	accaatgtat	180
tttctgctta	gcaacctctc	ctgcattgat	atgatcctgg	cttcttttgc	tacctctaag	240
atgattgtag	atttcctccg	agaacgtaag	accatctcat	gggtggggatg	ttattcccag	300
atgttcttta	tgacctctct	gggtgggagt	gagatgatgt	tgcttgtagc	catggcaata	360
gacaggtatg	ttgccatatg	caaaccctc	cattacatga	ccatcatgag	cccacgggtg	420
ctcactgggc	tactgttata	ctcctatgca	gttggatttg	tgcactcatc	tagtcaaatg	480

gctttcatgt	tgactttgcc	cttctgtggt	cccaatgtta	tagacagctt	tttctgtgac	540
cttccccctt	tgattaaact	tgcctgcaag	gacacctaca	tcctacagct	cctgggcatt	600
gctgacagt	ggctcctgtc	actggctctg	ttcctcctct	tgcttgtctc	ctatggagtc	660
ataatattct	cagttaggta	ccgtgctgct	agtcgatcct	ctaaggcttt	ctccactctc	720
tcagctcaca	tcacagttgt	gactctgttc	tttgctccgt	gtgtctttat	ctacgtctgg	780
cccttcagca	gatactcggg	agataaaatt	ctttctgtgt	tttacacaat	tttcacacct	840
ctcttaaate	ctattattta	tacattaaga	aatcaagagg	taaaagcagc	cattaaaaaa	900
agactctgca	ta					912

<210> 663

<211> 963

<212> DNA

<213> Unknown (H38g512 nucleotide)

<220>

<223> Synthetic construct

<400> 663

atgggtcaatt	tgacttcaat	gagtggattc	cttcttatgg	ggttttctga	tgagcgtaag	60
cttcagattt	tacatgcatt	ggtatttctg	gtgacatacc	tgctggcctt	gacaggcaac	120
ctcctcatta	tcaccatcat	taccgtggac	cgctgtctcc	attcccccat	gtattacttt	180
ttaaagcacc	tctctcttct	ggacctctgc	ttcatctctg	tcacagtecc	ccagtccatt	240
gcaaattcac	ttatgggcaa	cggttacatt	tctcttggtc	agtgcattct	tcagggtttc	300
ttcttcatag	ctctggcctc	atcagaagt	gccattctca	cagtgatgtc	ttatgacagg	360
tacgcagcaa	tctgtcaacc	acttcattat	gagactatta	tggatccccg	tgctgttagg	420
catgcagtga	tagctgtgtg	gattgctggg	ggcctctctg	ggctcatgca	tgctgccatt	480
aacttctcca	tacctctctg	tgggaagaga	gtcattcacc	aattcttctg	tgatgttctt	540
cagatgctga	aactagcctg	ttcttatgaa	ttcattaatg	agattgcact	ggctgcattc	600
acaacgtctg	cagcatttat	ctgtttgatc	tccattgtgc	tctcctacat	tcgcactctc	660
tctacagtgc	tgagaatccc	atcagctgag	ggcgggacca	aggtcttctc	cacctgccta	720
ccacacctat	ttgtagccac	cttctttctt	tcagctgcag	gctttgagtt	tctcagactg	780
ccttctgatt	cctcatcgac	tgtggacctt	gtattctcog	tattctatac	tgtgatacct	840
ccaacactca	atccagtcac	ttatagctta	cggaatgatt	ccatgaaggc	agcactgagg	900
aagatgctgt	caaaggaaga	gcttcctcag	agaaaaatgt	gcttaaaagc	catgtttaaa	960
ctc						963

<210> 664

<211> 930

<212> DNA

<213> Unknown (H38g513 nucleotide)

<220>

<223> Synthetic construct

<400> 664

atggaccac	agaactattc	cttgggtgtca	gaatttgtgt	tgcatggact	ctgcacttca	60
cgacatcttc	aaaatttttt	ctttatatatt	ttctttgggg	tctatgtggc	cattatgctg	120
ggtaaccttc	tcatttttgt	cactgtaatt	tctgatccct	gcctgcactc	ctccccatg	180
tacttctctg	tggggaacct	agctttcctg	gacatgtggc	tggcctcatt	tgccactccc	240
aagatgatca	gggatttctt	tagtgatcaa	aaactcatct	cctttggagg	atgtatggct	300
caaactcttct	tcttgcactt	tactgggtggg	gctgagatgg	tgctcctggt	ttccatggcc	360
tatgacagat	atgtggccat	atgcaaacc	ttgcattaca	tgactttgat	gagttggcag	420
acttgcata	ggctgggtgt	ggcttcattg	gtcgttggat	ttgtgcactc	catcagtcaa	480
gtggctttca	ctgtaaaattt	gccttactgt	ggccccaatg	aggtagacag	cttcttctgt	540
gacctccctc	tggtgatcaa	acttgcctgc	atggacacct	atgtcttggg	tataattatg	600
atctcagaca	gtgggtttgt	ttccttgagc	tgttttctgc	tcctcctgat	ctcctacacc	660
gtgatccctc	tcgctatcag	acagcgtgct	gccggtagca	catccaaagc	actctccact	720
tgctctgcac	atatcatggg	agtgaagctg	ttctttggcc	cttgcatttt	tgtttatgtg	780
cggcctttca	gtaggttctc	tgtggacaag	ctgctgtctg	tgttttatac	catttttact	840
ccactcctga	acccatttat	ctacacattg	agaaatgagg	agatgaaagc	agctatgaag	900
aaactgcaaa	accgacgggt	gacttttcaa				930

<210> 665
 <211> 957
 <212> DNA
 <213> Unknown (H38g514 nucleotide)

<220>
 <223> Synthetic construct

<400> 665

atggaaagaa	agaatcaaac	agctataact	gaattcatca	tcttgggatt	ctccaäccta	60
aatgaattgc	agtttttact	attcaccatc	ttctttctga	cttatttctg	tactttggga	120
ggaaatatat	taattatctt	gacgactgtg	actgatccac	acctgcatac	acctatgtat	180
tattttctag	ggaacttggc	ctttattgac	atctgctaca	ccaccagcaa	tgtccccag	240
atgatggtgc	acctcctctc	aaagaaaaaa	agcatttctt	atgtgggggtg	tgtgggttcaa	300
ctttttgcat	ttgttttctt	tgtaggatca	gagtgtctcc	tactggcagc	aatggcatat	360
gatcgttaca	ttgcaatctg	caatccttta	aggtattcag	ttattctgag	caaggttcta	420
tgcaatcaat	tagcagcctc	atgctgggct	gctgggttcc	ttaaactcagt	gggtgcataca	480
gtgttgacat	tctgcctgcc	cttctgtggc	aacaatcaga	tttaattactt	cttctgtgac	540
atccccctt	tgtgatctt	gtcttgtgga	aacacttctg	tcaatgagtt	ggcactgcta	600
tccactgggg	tcttcattgg	ttggactcct	ttcctttgta	tcgtactttc	ctacatttgc	660
ataatctcca	ccatcttgag	gatccagtc	tcagagggaa	gacgaaaagc	cttttctaca	720
tgtgcctccc	acctggccat	tgtctttctc	ttttatggca	gcgccatctt	tacatatgta	780
cggcccatct	caacttactc	attaaagaaa	gatagggttg	tttcagtgtt	gtacagtgtt	840
gttaccacca	tgctaaacct	tataatttac	acattgagga	ataaggacat	caaagaagct	900
gtcaaaacta	tagggagcaa	gtggcagcca	ccaatttctt	ctttggatag	taaactc	957

<210> 666
 <211> 910
 <212> DNA
 <213> Unknown (H38g515 nucleotide)

<220>
 <223> Synthetic construct

<400> 666

atgagagaat	ttttcttgtc	agggttctca	cagacaccat	ctattgaagc	agggtatatt	60
gtactatttc	ttttcttcta	tatgtccatt	tgggttggca	atgtcctcat	catggtcaca	120
gtagcatctg	ataaatacct	gaattcatca	cccatgtatt	tccttcttgg	caacctctca	180
tttctggacc	tatgttattc	aacagtaacg	accctaagc	ttctggctga	cttctttaat	240
catgaaaaac	tcatttccta	tgaccaatgc	attgtgcaac	tcttcttctc	gcattttgta	300
ggggcagctg	agatgttctt	gctcacagtg	atggcgtagc	atcgctatgt	tgcaatctgt	360
cgcccgctgc	actacaccac	tgtcatgagt	cgggggttat	gctgtgtgtt	ggttgctgcc	420
tcttggatgg	gaggattttg	gcactccact	gtccagacca	ttctcactgt	ccatctaccc	480
ttttgtgggc	caaatcagggt	ggaaaacttt	tttttgtgat	gttccccctg	tcataaaact	540
tgcttgtgct	gacacttttg	tcattgaatt	gctcatggta	tctaacagtg	ggttgatctc	600
caccatctcc	tttgtgggtg	tgatttcctc	ctacaccact	atcctagtca	agattcgctc	660
caaggaagga	aggcgaaagg	cactctccac	gtgtgcctct	cacctcatgg	tggtaacact	720
gttttttggg	ccctgtattt	tcactctacg	tcgtcctttc	tctacatttt	ctgtggacaa	780
gatggtgtct	gtactctaca	atgttattac	cccaatgcta	aacccccctc	tctacacact	840
tcggaacaaa	gaggtaaagt	cagccatgca	gaagctctgg	gtcagaaatg	ggcttacttg	900
gaaaaagcag						910

<210> 667
 <211> 945
 <212> DNA
 <213> Unknown (H38g516 nucleotide)

<220>
 <223> Synthetic construct

<400> 667

atggagaatg	tcactacaat	gaatgagttt	cttctacttg	gcctgactgg	tgttcaggag	60
ctgcagcctt	tcttcttttg	gattttctta	atcatttacc	tgataaaactt	gattggaaat	120
ggatctatat	tggtgatggg	tgttttggaa	ccacaactcc	actccccctat	gtattttttt	180
ctgggaaacc	tttcttgctt	ggatatttct	tattcttcag	tgacactgcc	caagctgctc	240
gtaaacctcg	tgtgcagtcg	cagggtctata	tcttttctag	gctgtatcac	ccagctacac	300
ttcttccact	ttttgggaag	cacagaggcc	attttactgg	ctatcatggc	ctttgaccgt	360
tttgttgcca	tctgcaatcc	tcttcgctac	actgtcatca	tgaaccccca	ggtgtgtatt	420
ctgttggcag	ctgcggcctg	gctcatcagc	ttcttttacg	ctctgatgca	ttctgtcatg	480
actgcacacc	tgagtttttg	tggtctcag	aaactcaatc	acttcttcta	cgaatgcaag	540
ccgctcttag	aattggcctg	tagtgacaca	ttactcaatc	aatggcttct	ttccattgtc	600
acaggcagca	tatccatggg	agctttcttt	ctgactcttc	tctcctgctt	ctatgtaatt	660
ggcttccttc	tgtttaagaa	caggctcctgc	agaatactcc	acaaggctct	gtccacttgt	720
gcctcccat	ttatgggtgt	atgtcttttc	tatggacctg	tggtgcttcac	atatattcgt	780
cctgcttcag	ccacctccat	gattcaggac	cggataatgg	ccatcatgta	tagcgccgtc	840
accctgtac	tgaatccact	aatctacacc	cttaggaaca	aagaagtgat	gatggctctg	900
aagaaaatct	ttggtaggaa	gttgtttaaa	gactggcagc	aacac		945

<210> 668

<211> 966

<212> DNA

<213> Unknown (H38g517 nucleotide)

<220>

<223> Synthetic construct

<400> 668

atgaatgaga	caaatcattc	tcgggtgaca	gaatttgtgt	tgctgggact	gtctagttca	60
agggagctcc	aacctttctt	gtttcttaca	ttttcactac	tttatctage	aattctgttg	120
ggcaactttt	tcacatcct	cactgtgacc	tcagattccc	gccttcacac	ccccatgtac	180
ttctgcttg	caaacctgtc	atttatagac	gtatgtgttg	cctcttttgc	taccctaaa	240
atgattgcag	actttctggt	tgagcgcaag	actatttctt	ttgatgcctg	cctggcccag	300
attttctttg	ttcatctctt	cactggcagt	gaaatgggtgc	tcctagtttc	catggcctat	360
gaccgttatg	ttgctatatg	caaacctctc	cactacatga	cagtcatgag	ccgtcgtgta	420
tgtgttgtgc	tcgtcctcat	ttcatgggtt	gtgggcttca	tccatactac	cagccagttg	480
gcattcactg	ttaatctgcc	attttgtggt	cctaataagg	tagacagttt	tttctgtgac	540
cttctcttag	tgaccaagtt	agcctgcata	gacacttatg	ttgtcagctt	actaatagtt	600
gcagatagtg	gctttctttc	tctgagttcc	tttctcctct	tggttgtctc	ctacactgta	660
atacttggtt	cagttaggaa	tcgtcctctt	gcaagcatgg	cgaaggcccg	ctccacattg	720
actgctcaca	tcactgtggt	cactttatct	tttgaccat	gcattttcat	ctatgtgtgg	780
cccttcagca	gttactcagt	tgacaaagtc	cttgctgtat	tctacaccat	cttcacgctt	840
attttaaacc	ctgtaatcta	cacgctaaga	aacaaagaag	tgaaggcagc	tatgtcaaaa	900
ctgaagagtc	ggtatctgaa	gcctagtcag	gtttctgtag	tcataagaaa	tgttcttttc	960
ctagaa						966

<210> 669

<211> 594

<212> DNA

<213> Unknown (H38g518 nucleotide)

<220>

<223> Synthetic construct

<221> misc_feature

<222> (1)...(594)

<223> n = A,T,C or G

<400> 669

gnnccgctac	tactacccat	gtactgtttc	ctgnctatac	tgcccgccac	tgacctcggc	60
ctgtccatat	ccactctggt	caccatgctg	agtatatctt	ggttcaatgt	gagggaaatc	120
agctttaatg	cctgcttgtc	ccacatgttc	tttattaaat	tcttcaactg	catggaatcc	180

tcagtgtgtg	tggccatggc	ttttgatcgt	tttgtggccg	tctctaatec	ccttaggtat	240
gccatgattt	taactgactc	cagaatagct	caaattggag	tggcaagtgt	catcaggggg	300
ctcctaagtc	tgacaccaat	ggtagcactt	cttataagac	tttcctactg	ccacagcccc	360
agtactccac	cactcctact	gctaccaccc	tgatgtgatg	aagttctcat	gcacagacgc	420
cagaatcaac	agtgcagttg	ggctgactgc	catgttctct	actggttggg	gtagacttac	480
ttctcactct	cctttcttat	gttttgatca	ttaggactgt	ccttancgtt	gcttccccag	540
aagagaggaa	ggaaaccctt	cagtacatgt	gtctcccaca	ttgggggctt	ttgc	594

<210> 670

<211> 939

<212> DNA

<213> Unknown (H38g519 nucleotide)

<220>

<223> Synthetic construct

<400> 670

atgagccctg	agaaccagag	cagcgtgtcc	gagttcctcc	ttctgggcct	ccccatccgg	60
ccagagcagc	aggctgtgtt	cttcaccctg	ttcctgggca	tgtacctgac	cacgggtgctg	120
gggaacctgc	tcatcatgct	gctcatccag	ctggactctc	accttcacac	ccccatgtac	180
ttcttcctca	gccacttggc	tctcactgac	atctcctttt	catctgtcac	tgcccttaag	240
atgctgatgg	acatgcggac	taagtacaaa	tcgatcctct	atgaggaatg	cattttctcag	300
atgtattttt	ttatatTTTT	tactgacctg	gacagcttcc	ttattacatc	aatggcatat	360
gaccgatatg	ttgccatatg	tcaccctctc	cactacactg	tcacatgag	ggaagagctc	420
tgtgtcttct	tagtggtgtg	atcttggatt	ctgtcttgtg	ccagctccct	ctctcacacc	480
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cttgctgccc	tgctcaagct	gtcctgctca	gatattcttc	tcaatgagct	ggtcattgtc	600
acagtagggg	tggtgggtcat	taccctgcca	ttcatgtgta	tcctgggtatc	atatgggtac	660
attggggcca	ccatcctgag	ggctccctca	accaaagggg	tccacaaagc	attgtccaca	720
tgtggctccc	atctctctgt	gggtgtctct	tattatgggt	caatatttgg	ccagtacctt	780
ttcccgactg	taagcagttc	tattgacaag	gatgtcattg	tggtctctcat	gtacacgggtg	840
gtcacacca	tggtgaaccc	ctttatctac	agccttagga	acagggacat	gaaagaggcc	900
cttgggaaac	tcttcagtag	agcaacattt	ttctcttgg			939

<210> 671

<211> 586

<212> DNA

<213> Unknown (H38g520 nucleotide)

<220>

<223> Synthetic construct

<400> 671

ckactactac	tacctatgta	tttttttctk	kgcaacctgt	cactgttaga	tctctgcctt	60
ccttcaatcc	ctgtgcccaa	gatgetgcag	aatttattaa	ctcaaaggta	aaccatctct	120
atgtgggtact	gcattgtcca	gagtttcttt	ctcatattct	ctgggagcac	agaagcctgc	180
ctactccttg	ccatggcctg	tgatcactct	acttccaact	gccaccctcg	gctcaacgat	240
gtgggttatga	atcagcctgt	ctgtgtcagg	atgggtgattg	cagcatgggc	agtgggattc	300
ctaaactcct	tgacaaagaa	tcttttcatt	tacaacttac	acttctgtgg	ccccagtgtc	360
atccctcact	tctgtctgta	gctgccttca	ctcttccctc	tctcttgat	tgatccagct	420
gccagtggag	tccttctctg	tggtgtcatgt	acattgctag	gatttgtgac	ttgccgctgg	480
tcctcttttc	ttactctaac	accatctctg	cctcctagcc	atttgktttt	ctgagggtca	540
aggcaaagcc	ttctccacct	gctcctccca	cctcaccgtg	gtgctt		586

<210> 672

<211> 918

<212> DNA

<213> Unknown (H38g521 nucleotide)

<220>

<223> Synthetic construct

<400> 672

atgagccctg	agaaccagag	cagcgtgtcc	gagttcctcc	tectgggect	ccccatccgg	60
ccagagcagc	aggccgtgtt	cttcgccctg	ttcctgggca	tgtacctgac	cacgggtgctg	120
gggaacctgc	tcacatgct	gctcatccag	ctagactctc	accttcacac	ccccatgtac	180
ttcttccetta	gccacttggc	cctcactgac	atctcctttt	catctgtcac	tgccctaag	240
atgctgatga	acatgcagac	tcagcaccta	gccgtctttt	acaagggatg	catttcacag	300
acatatTTTT	tcatatTTTT	tgctgactta	gacagtttcc	ttatcacttc	aatggcatat	360
gacaggtatg	tggccatctg	tcactcctta	cattatgccca	ccatcatgac	tcagagccag	420
tgtgtcatgc	tgggtggctgg	gtcctgggtc	atcgcttgtg	cgtgtgctct	tttgataacc	480
ctcctcctgg	cccagctttc	cttctgtgct	gaccacatca	tccctcacta	cttctgtgac	540
cttgggtgcc	tgtcaagtt	gtcctgctca	gacacctccc	tcaatcagtt	agcaatcttt	600
acagcagcat	tgacagccat	tatgcttcca	ttcctgtgca	tcctgggttc	ttatggtcac	660
attgggtcca	ccctctcca	gattcctctc	accaagggca	tatgcaaagc	cttgtccact	720
tgtggatccc	acctctcagt	ggtagactac	tattatcgga	caattattgg	tctctatttt	780
cttcccccat	ccagcaaac	caatgacaag	aacataattg	cttcagtgat	atacacagca	840
gtcactccca	tgttgaaccc	attcattttac	agtctgagaa	ataaagacat	taagggagcc	900
ctaagaaaac	tcttgagt					918

<210> 673

<211> 591

<212> DNA

<213> Unknown (H38g522 nucleotide)

<220>

<223> Synthetic construct

<400> 673

ctactactac	cyatgtatTT	ttttcttggc	aacctstccc	tcattggacat	ctggggcacc	60
tcctcctttg	tgctctcat	rtagacaat	ttcctggaaa	cccagaggac	catttccttc	120
cctggctgtg	ccctgcagat	gtacctgacc	ctggcgctgg	gatcaacgga	gtgctgctg	180
ctggctgtga	tggcatatga	ccgttatgtg	gctatctgcc	agccgcttag	gtacycagag	240
ctcatgagtg	ggcagacctg	catgcagatg	gcagcgctga	gctgggggac	aggctttgcc	300
aactcactgc	tacagtccat	ccttgtctgg	cacctcccc	tctgtggcca	cgcatcaac	360
tacttctatg	agatcttggc	agtgtcaaaa	ctggcctgtg	gggacatctc	cctcaatgcy	420
ctggcattaa	tgggtggccac	agccgtcctg	acactggccc	ccctcttgc	catctgctg	480
tcttaccttt	tcactcctgtc	tgccatcctt	agggtaccct	ctgctgcagg	ccggtgcaaa	540
gccttctcca	cctgctcagc	ccaccgcaca	gtgggtgggtg	tttttatgg	g	591

<210> 674

<211> 985

<212> DNA

<213> Unknown (H38g523 nucleotide)

<220>

<223> Synthetic construct

<400> 674

gttaatggat	ggagtaataa	atcagtgggt	actgaattca	atTTgttggg	gctgtctagc	60
tcttgggaac	tccaagtctt	ctttttcttt	atcttctctg	tgttttatgg	agctgcagtg	120
ttgggaataa	tccttatcat	catcacagta	attatagact	ctcatttgca	ttccccaatg	180
tactttcttc	ttagcaatct	ctcttccatc	gatgtgtgtc	aggctacatt	tgccactccc	240
aagatgattg	cagacttcct	caacgaacac	aagaccacca	ctttccaggg	atgcatgtca	300
caaattcttt	tcttgcattg	ttttgggggt	agtgcagatg	tgcttcttgt	tgccatggcc	360
tatgatagat	acattgctat	atgcaaacct	ctgcaactaca	tgaccatcat	gaaccggagg	420
gtgtgaactg	ttctgggtgg	ggtttcctgg	gccattggca	tctcacactc	agccaccac	480
ctggcattca	aagtcaatct	gcctttctgt	ggaccaaca	gggtagacaa	ttttttctgt	540
gacctcctcc	tagtgatcaa	gcttgcctgc	ttagacacct	atggttttga	gatactgggtg	600
ctcactaaca	gtgggtctgct	ctcacttatg	tgtttcctcc	ttttgtcat	ttctgacact	660
atcactcctg	ctactgtgca	tcgccaagcc	tctgatggga	tgtccaaggc	cctttccact	720
ctgtctgccc	acattactgt	tgtgcttctc	ttctttggcc	cattaatatt	catctatatt	780

tgccctttg aaagcttccc aattgataaa tttatctctg tgttttttta ctgtcttcac	840
tcctctcctt aaccccatga tttatactct gaggaataaa gatataaagg aagccatgag	900
gaagctaagg agatgacatg tgggttccaa gcagggtttt tagacaacta caaagaagta	960
atacaaattc ctacttttgg gcttt	985

<210> 675

<211> 780

<212> DNA

<213> Unknown (H38g524 nucleotide)

<220>

<223> Synthetic construct

<221> misc_feature

<222> (1)...(780)

<223> n = A,T,C or G

<400> 675

atgtatttct tcttgagttt tttgtctctc actgatattt gctttacaac aagcgttgtc	60
cccaagatgc tgatgaactt cctgtcagaa aagaagacca tctcctatgc tgggtgtctg	120
acacagtatg tattttctct atgccttggg caacagtgac agctgccttc ttctgtaant	180
gcctttgacc gctatgttgc cgtctgtgac cctttccact atgtcaccac catgagccac	240
caccactgtg ttctgctggt ggccttctcc tgctcattta cttaccttca ctcactcctg	300
cacacacttc tgctgaatcg tctcaccttc tgtgactcca atgttatcca ccactttctc	360
tgtgacctca gccctgtgct gaaattgtcc tgctcttcca tatttgtaaa tgaaattgtg	420
cagatgacag aagcacctat tgttttgggt actcgttttc tctgcattgc tttctcttat	480
atacgaatcc tctactacagt tctcaagatt cctctactt ctgggaaacg caaagccttc	540
tccacctgtg gtttttacct caccgtggtg acgctctttt atggaagcat cttctgtgtc	600
tatttacagc ccccatccac ctacgctgtc aaggaccacg tggcaacaat tgtttacaca	660
gttttgtcat ccatgctcaa tccttttatc tacagcctga gaaacaaaga cctgaaacag	720
ggcctgagga agcttatgag caagagatcc taggaagcac cctcttgaaa aactcgtaag	780

<210> 676

<211> 576

<212> DNA

<213> Unknown (H38g525 nucleotide)

<220>

<223> Synthetic construct

<400> 676

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accacgagca ttgtcccaca gctcctggct aacctctggg gaccacagaa aaccataagc	120
tatggagggt gtgtgggtcca gttctatata tcccatggc tgggggcaac cgagtgtgtc	180
ctgctggcca ccatgtccta tgaccgctac gctgccatct gcaggccact ccattacact	240
gtcattatgc atccacagct ttgccttggg ctacgttttg cctcctggct ggggggtctg	300
accaccagca tgggtgggctc cacgctcacc atgctcctac cgctgtgtgg gaacaattgc	360
atcgaccact tcttttgcca gatgcccctc attatgcaac tggtttgtgt ggataccagc	420
ctcaatgaga tgggagatgt acctggccag ctttgtcttt gttgtcctgc ctctggggct	480
catcctggtc tcttacggcc acattgccgg gccgkgttga agaacaagtc agcagaaggg	540
cggagaaagg cattcaacac ctgttctttc cacgtg	576

<210> 677

<211> 929

<212> DNA

<213> Unknown (H38g526 nucleotide)

<220>

<223> Synthetic construct

<400> 677

atggatataa	gaaacagctc	aataataatc	tgagtttgtt	ttgttagaat	tcatcagcac	60
ttgggaactt	gaaattttgt	ttcttaaata	tttttgttgg	cctatgcagc	aatcatggca	120
ggaaacctca	ctgcaatcgc	tgtaacctcc	aatcctcccc	tttgctcaac	acctatgtac	180
ttcttccttg	gaaatctctc	ctttctcagt	atgtttatatt	ccacagtcac	aatctctaag	240
atggtccaga	cgttctcagg	gagaataaaa	ccacttcctc	atggggctgt	atggctcaga	300
tctccacttc	ttaggaggca	gtgagatgac	tcttctcata	tttatggctg	ttgatcagca	360
cattgcaata	tgcagacctc	ttcactgcag	aaccatcacg	aactgcaggg	tactcatggc	420
cactcatggg	ctctgtgctg	ctatcacggg	ctgttggttt	tgtgcatact	ataagccaga	480
ttgtttttat	tatcaccttg	cccttctgtg	gccccagtgt	ggtggacaat	ttattttgag	540
accttcctct	agttctgaag	cttgccctgca	ctgagactta	tgatctggag	ttgctggtaa	600
ttgctaaaag	tggacagttg	tctttcatct	gcttcatagt	cttgctcatt	ttctacacta	660
ttattctggg	aactgtgcag	catcgatcct	ctgatgcact	ctccaaggct	ctgtccacac	720
tgtctgctca	tatcactgca	gtcactctat	ttttatgagc	catgtgtcta	catttacact	780
tggccattta	ggagcttttc	agtggataca	tttctttctg	tgttttattc	agttacaccc	840
ttactgaacc	ccattactta	cagtctgaga	tgaaagcatt	tatacatcaa	ctgaggaccc	900
aacacatcat	ctccagacaa	accttctct				929

<210> 678

<211> 595

<212> DNA

<213> Unknown (H38g527 nucleotide)

<220>

<223> Synthetic construct

<400> 678

ctactactac	ccatgtattt	ttttctgtgc	aacctgtccc	tggtggactt	tggttattcc	60
tcagctgtca	ctcccaagg	gatgggtggg	tttctcacag	gagacaaatt	catattatat	120
aatgcttgtg	ccacacaatt	cttcttcttt	gtagccttta	tactgcaga	aagtttcctc	180
ctggcatcaa	tggcctatga	cgctatgca	gcattgtgta	aacccctgca	ttacaccacc	240
accatgacaa	caaatgtatg	tgctgcctg	gcataggct	cctacatctg	tggtttcctg	300
aatgcatcca	ttcatactgg	gaacactttc	aggtctcct	tctgtagatc	caatgtagtt	360
gaacactttt	tctgtgatgc	tctctctctc	ttgactctct	catgttcaga	caactacatc	420
agttagatgg	ttattttttt	ttgtgggtgg	attcaatgac	ctcttttcta	tcctggtaat	480
cttgatctcc	tacttattta	tatttatcac	catcatgaag	atgcgctcac	ctgaaggacg	540
ccagaaggcc	ttttctactt	gtgcttccca	ccttactgca	gtttccatct	tttat	595

<210> 679

<211> 945

<212> DNA

<213> Unknown (H38g528 nucleotide)

<220>

<223> Synthetic construct

<400> 679

atggaggcca	tgaaactatt	aatcaatct	caagtgtcag	aattcatttt	gctgggactg	60
accagctccc	aggatgtaga	gtttcttctc	tttgccctct	tctcggttat	ctatgtgggc	120
acagtttttg	gtaaccttct	tattatagtc	acagtgttta	acacccttaa	cctgaatact	180
cccattgtatt	ttctccttgg	taatctctct	ttttagata	tgacccttgc	ttcttttggc	240
acccctaagg	tgattctgaa	cttggttaaaa	aagcagaagg	taatttcttt	tgctgggtgc	300
ttcactcaga	tattttctct	tcaattactg	ggtggggttg	aaatgggtact	gttgggtctc	360
atggcttttg	acagatatgt	ggccatttgt	aagcccttac	actacatgac	catcatgaac	420
aagaagggtat	gtgttttggc	tgtagtgacc	tcatggctct	tgggtctcct	tactcagggg	480
tttcagatac	catttgcgtg	gaacttgccc	ttttgtgggc	ccaatgtggg	agacagcatt	540
ttttgtgacc	tccctttggg	tactaagctt	gctgtatag	acatatattt	tgtacaggta	600
gtcattgttg	ccaacagtgg	cataatctcc	ctgagctggt	tcattatttt	gcttatctcc	660
tacagtctga	tctcataaac	cattaagaac	cactctccta	ctgggcaatc	taaagcccgt	720
tccactttga	ctgctcacat	cacagtgggt	attctcttct	ttggcccatg	catctttatc	780
tacatttggc	ccttcggcaa	ccactctgta	gataagttcc	ttgctgtggt	ttataaccatc	840
atcactccta	tcttgaatcc	aattatctat	actctgagaa	acaaagaaat	gaagatatcc	900

atgaaaaaac tctggagagc ttttgtgaat tctagagaag atact

945

<210> 680

<211> 951

<212> DNA

<213> Unknown (H38g529 nucleotide)

<220>

<223> Synthetic construct

<400> 680

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cttgaatggc	aggccctgct	ctttgtcatt	ttcctgctca	tctactgcct	gaccattata	120
gggaatgttg	tcatcatcac	cgtggtgagc	cagggcctgc	gactgcactc	ccctatgtac	180
atgttcctcc	agcatctctc	ctttctggag	gtctggtaca	cgccaccac	tgtgcccctt	240
ctcctagcca	acctgctgtc	ctggggccaa	gccatctcct	tctctgcctg	catggcacag	300
ctctacttct	tcgatttctt	cggcgccacc	gagtgtcttc	tcctggcctt	catggcctat	360
gaccgttacc	tggccatctg	cagccactc	cgctaccctt	ttctcatgca	tcgtgggcta	420
tgtgccaggt	tggtggtggt	ctcatggtgc	acaggggtca	gcacaggctt	tctgcattcc	480
atgatgattt	ccaggttggg	cttctgtggg	cgcaatcaga	ttaaccattt	cttctgcgac	540
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atcctgtcaa	ttgccgtgct	gtgcatttgt	ttttttctga	cactggggcc	ctatgttttc	660
attgtgtcct	ccatattgag	aatcccttcc	acctctggcc	ggagaaagac	cttttccaca	720
tgtggctccc	acctggctgt	tgctactctc	tactacggga	ccatgatctc	catgtatgtg	780
tgtcccagtc	cccacctgtt	gcctgaaatc	aacaagatca	tttctgtctt	ctacactgtg	840
gtcacaccac	tgctgaacct	agttatctac	agcttgagga	acaaagactt	caaagaagct	900
gttagaaagg	tcatgagaag	gaaatgtggt	attctatgga	gt'acaagtaa	a	951

<210> 681

<211> 1005

<212> DNA

<213> Unknown (H38g530 nucleotide)

<220>

<223> Synthetic construct

<400> 681

tctacagacc	cacagaatct	aacagatgtc	tctatatctc	tcctcctaga	agctcagagg	60
atccagaatg	gcagccggtc	ctcactgggc	tgtgcctgtc	catgtgcctg	gtcacgggtgc	120
tggggaacct	gctcatcatc	ctggccgtca	gccctgactc	ccacctccac	atccccatgt	180
acttcttctt	ctccaacctg	tccttgcttg	acatcggttt	cacctccacc	acgggtcccca	240
agatgattgt	ggacatccag	tctcacagca	gagtcacttc	ctacgcaggc	tgcttgactc	300
agatgtctct	ctttgccatt	tttgagggca	tggaagagag	acatgctcct	gagtgtgata	360
gcctatgagc	ggtttgtagc	catctgtcac	cctctatatc	attcagccat	catgaaccca	420
tgtttctgtg	gctttctagt	tttgttgtct	tttttttttt	ctcagtcttt	tagacgceca	480
gctgcacaac	ttgattgcct	tacaaaggac	ctgcttcaag	gatgtggaaa	ttcctaattt	540
cttctgtgac	ccttctcaac	tccccatctt	gcattattgtg	gcaccttcac	caataacata	600
atcatgtatt	tccttgccgc	catatttggt	tttcttccca	tctcggggac	gcttttctct	660
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ggctacctca	gttcagatgt	gtcatcttcc	ccgagaaagg	ctgcagtggc	ctcagtgatg	840
tacacggtgg	tcatccccat	gccgaacccc	ttcatctaca	gcctgagaaa	cagggatattg	900
aaaagtgtcc	tgcagcggcc	acatggcagc	acgatctcat	ctcaatatct	tcttatttgt	960
tccattcctt	ttgtagtgtg	ggttaaaaaa	ggcagcaagg	tcaaa		1005

<210> 682

<211> 990

<212> DNA

<213> Unknown (H38g531 nucleotide)

<220>

<223> Synthetic construct

<400> 682

cacacagagc	cacagaatct	cacaggtatc	tgagaattcc	tcctcctggg	actctcagag	60
gatccagaac	tgcagccggt	cctcgctggg	ctgtccctgt	ccatgtatct	ggtcacgggtg	120
ctgaggaacc	tgtcagcac	cctggctgtc	agctctgact	ccccctcca	cacccccatg	180
tacttcttcc	tctccaacct	gtgctgggct	gacatcgggt	tcaccttggc	catagttccc	240
aagatgactg	tggaatgca	gtctcatagc	agagtcactc	ctcatgcggg	ctgcctgaca	300
cagatgtctt	tcttggctct	ttttgcatgt	atagaagaca	tgttcctgac	tgtgatggcc	360
tatgacagat	ttgtagccat	ctgtcgccct	ctttactacc	cagtcacatc	aaatcctcac	420
ctctgtgtct	tcttcgtttt	gggtgtcctt	ttccttagcc	tggtggattc	ccagctgcac	480
agttggattg	tgtgacaatt	caccttctcc	aagaatgtgg	aaatctctaa	ttttgtctgt	540
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tattttgata	gtactatgtt	tggttttctt	cccatttcaa	ggatcctttt	gtcttactat	660
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accctgtgga	ggctgcgcag	cagaagagtg	gaatctcatg	atctgtttcca	tccttttttt	960
gtgtgggtga	gaaagggcaa	ccacattaaa				990

<210> 683

<211> 1005

<212> DNA

<213> Unknown (H38g532 nucleotide)

<220>

<223> Synthetic construct

<400> 683

tctacagacc	cacaaaatct	aatagatgtc	tttgtattcc	tcctcctgga	acctcagagg	60
atccagaacg	gcagctggtc	cttgcctggg	tgttcctgtc	catgtgcctg	gtcacgggtgc	120
tggggaacct	gctcatcatc	ctggccgtca	gccctgactc	ccacctccac	acccccatgt	180
acttcttctc	ctccaacctg	tccttgccctg	acatcggttt	cacctccacc	acgggtcccca	240
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agacgtctct	ctttgccatt	tttggaggca	tgggaagagag	acatgctcct	gagtgtgatg	360
gtctatgacc	ggtttgtagc	catctgtcac	cctctatata	attcagccgt	catgaacccc	420
tgtttctgtg	gctttctagt	tttgttgtct	tttttttttc	tcagtctttt	agacgccag	480
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ttctgtgacc	cttctcaact	ccccatctt	gcatgtttgt	acaccttcac	caataacata	600
atcatgtatt	ttcctgctgc	catatttggt	tttcttccca	tctcggggac	ccttttctct	660
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aaaagtgtcc	tgcggcggcc	gcacggcagc	acgggtgtaat	cttgatatct	tcttatctgt	960
tccattcctt	ttgtagtgtg	ggttaaaaaa	ggcagaaagg	tcaaa		1005

<210> 684

<211> 960

<212> DNA

<213> Unknown (H38g533 nucleotide)

<220>

<223> Synthetic construct

<400> 684

cacacagagc	cacggcatct	cacaggtgtc	tgagaattcc	tcctcctggg	actctcagag	60
gatccagaac	tgcagcctgt	cctcgctggg	ctgtccctgt	ccatgtatct	ggtcacagtg	120
ctaaggaacc	tgtcatcatc	cctggctgtg	agctctgact	ccccctcca	cacccccatg	180
tacttcttcc	tctccaacct	gtgctgggct	gacatcagtt	tcacctcggc	cacggttccc	240

aagatgacgg	tggacatgca	gtcgcatage	agagtcacat	cttatgcggg	ctgcctgaca	300
cggatgtctt	tcttcgtcct	ttttgcatgt	atagaagaca	tgtcctcgac	tgtgatggcc	360
taggactgct	ttgtagccat	ctgtcgccct	ctgcactacg	cagtcacgt	gaatcctcac	420
ctctgtgtct	tcttagtttt	ggtgtccttt	ttccttagcc	tgttggattc	ccagctgcac	480
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tatttcgata	gtactatggt	tgggttttct	cccatttcag	ggatcctttt	gtcttactat	660
aaaattgtcc	cctccattct	aaggatttca	tcgtcagatg	ggaagtataa	agccttctcc	720
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ctgacttcag	ctgtggcacc	accccccagc	aatggtgtgg	tggcatcagt	gaagtacacc	840
gtggtcaccc	ccatgctgaa	ccctttcatc	tacagcctga	gaaacaggga	cattcaaagc	900
accctgtgga	ggctgtgcag	cagaacagtt	aaatctcttg	atctgttcca	ttctttttct	960

<210> 685

<211> 982

<212> DNA

<213> Unknown (H38g534 nucleotide)

<220>

<223> Synthetic construct

<400> 685

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tgaggaaaca	gcactgaagt	gactgaattc	tgtcttctgg	gatttgggtg	ctagcaagag	120
ttttgggtga	tcctcttcat	tatattcctt	ctcatctatg	tgacctccat	aatgggtaat	180
agtggataaa	tcttactcat	caacacagat	tccagatttc	aaacacccat	gtactttttt	240
ctacaacatt	tggcttttgt	tgatattctg	tacactttctg	ctatcactcc	caagatgctc	300
caaagcttca	cggaaagaaa	gaatttgata	tcattttggg	gctgcatgat	acaattattg	360
gtttatgcaa	catttgcaac	cagtgcactg	tatctcctgg	ctatgatagc	agtggaccat	420
tatgttgcaa	tctgtaagcc	ccttccactat	accgtaatca	cgtcccaaac	agtctgcac	480
catttggtag	ctggttcata	catcatgggc	tcaataaatg	cctctgtaca	tacaggtttt	540
gcattttcac	tgtctttctg	caagtcgaat	aacatcaacc	actttttctg	tgatgggtccc	600
ccaattcttg	ccctttcatg	ctccaatatt	gacatcaaca	tcattgctact	tgttgccttt	660
gtgggattta	acttgatggt	cactgggttg	gtagtcacat	tttcctacat	ctacatcatg	720
gccaccatcc	tgaaaatgtc	ttctagtgc	ggaaggaaaa	aatccttctc	aacatgtgcc	780
tcccacctga	ccacagttgc	cattttctat	gggacactct	cttacatgca	cttaccagtc	840
tcatttcta	aatcccagg	agaatatgaa	agtggcctct	atattttatg	gcactgttat	900
tcccatgttg	aatcccttaa	tctatagctt	gagaaataag	gaagtaaaag	aagctttaaa	960
attgataggg	aaaaagttct	tt				982

<210> 686

<211> 927

<212> DNA

<213> Unknown (H38g535 nucleotide)

<220>

<223> Synthetic construct

<400> 686

atgacactag	gaaacagcac	tgaagtcact	gaattctatc	ttctgggatt	tgggtgcccag	60
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ggtaaatagt	gaataatctt	actcatcaac	acagattcca	gatttcaaac	actcacgtac	180
ttttttctac	aacatttggc	ttttgttgat	atctgttaca	cttctgctat	cactcccaag	240
atgctccaaa	gcttcacaga	agaaaagaat	ttgatgttat	ttcagggctg	tgtgatacaa	300
ttcttagttt	atgcaacatt	tgcaaccagt	gactgttatc	tcctgggctat	gatggcagtg	360
gaccccttat	ttgccatctg	taagccctt	cactatactg	taatcatgtc	ccgaacagtc	420
tgcacccgtt	tggtagctgg	ttcatacatc	atgggctcaa	taaatgcctc	tgtacaaaca	480
ggttttacat	gttcaactgc	cttctgcaag	tccaatagca	tcaatcactt	tttctgtgat	540
gttcccccta	ttcttgcctt	ttcatgtctc	aatgttgaca	tcaacatcat	gctacttggt	600
gtctttgtgg	gatctaactt	gatattcact	gggttggtcg	tcatcttttc	ctacatctac	660
atcatggcca	ccatcctgaa	aatgtcttct	agtgcaggaa	ggaaaaaatc	cttctcaaca	720

tgtgcttccc	acctgaccgc	agtcaccatt	ttctatggga	cactctctta	catgtatttg	780
cagtctcatt	ctaataattc	ccaggaaaat	atgaaagtgg	cctttatatt	ttatggcaca	840
gttattccca	tgtaaatacc	tttaatctat	agcttgagaa	ataaggaagt	aaaagaagct	900
ttaaaagtga	tagggaaaaa	gttatttt				927

<210> 687

<211> 894

<212> DNA

<213> Unknown (H38g536 nucleotide)

<220>

<223> Synthetic construct

<400> 687

atgggtcgag	gaaacagcac	tgaagtgact	gaattccatc	ttctgggatt	tggtgtccaa	60
cacgaatttc	agcatgtcct	tttcattgta	cttcttctta	tctatgtgac	ctccctgata	120
ggaaatattg	gaatgatctt	actcatcaag	accgattcca	gacttcaaac	acccatgtac	180
ttttttccac	aacatttggc	ttttgttgat	atctgttata	cttctgctat	cactcccaag	240
atgctccaaa	gcttcacaga	agaaaataat	ttgataacat	ttcggggctg	tgtgatacaa	300
ttcttagttt	atgcaacatt	tgcaaccagt	gactgttacc	tcctagctat	tatggcaatg	360
gattgttatg	ttgccatctg	taagcccctt	cgctatccca	tgatcatgtc	ccaaacagtc	420
tacatccaac	tcgtagctgg	ctcatatatt	ataggctcaa	taaatgcctc	tgtacataca	480
ggttttacat	tttactgtc	cttctgcaag	tctaataaaa	tcaatcactt	tttctgtgat	540
ggctctccaa	ttcttgccct	ttcatgtctc	aacattgaca	tcaacatcat	tctagatggt	600
gtctttgtgg	gatttgactt	gatgttctact	gagttgggtc	tcactctttc	ctacatctac	660
attatgggtc	ccatcctgaa	gatgtcttct	actgctggga	ggaaaaaatc	cttctccaca	720
tgtgcctccc	acctgacagc	agtaaccatt	ttctatggga	cactctctta	catgtactta	780
cagcctcagt	ctaataattc	tcaggagaat	atgaaagtag	cctctatatt	ttatggcact	840
gttattccca	tgttgaatcc	tttaatctat	agcttgagaa	ataaggaagg	aaaa	894

<210> 688

<211> 444

<212> DNA

<213> Unknown (H38g537 nucleotide)

<220>

<223> Synthetic construct

<400> 688

acgtacgacg	gcgcgagggg	ggtctctgta	ttgtttctta	caatacatgc	aaatctacaa	60
tgatgtcaat	aaaaattcaa	ttaaaaatac	atgtagtaaa	aatagttgct	aatctatgct	120
ggagtttact	tgaatgtcac	tatgtgtatc	gtcaccttca	agtacacaca	tatcttccat	180
catcctgagc	ttgccctctg	ctatgtgtct	ttttccgcag	ttgtcttcca	cctgacagct	240
gtcaccattt	tctttggagc	tctctcttac	atggacttac	aacctgaatc	tactgtgttt	300
caagagcaag	aaaagccagc	atccatattt	tgtggcatta	tgactctcgt	gttaaacttc	360
cttatctact	gcctgtgaaa	ttaggaagta	aaagaagctc	tacagttaac	aaggaaaaag	420
tattaataca	tgtagactga	gggt				444

<210> 689

<211> 888

<212> DNA

<213> Unknown (H38g538 nucleotide)

<220>

<223> Synthetic construct

<400> 689

atgctagtgt	cacaacagga	gcagcctctt	ctgtttggca	tcttccttgg	catgtacctg	60
gtcaccatgg	tggggaacct	gtcattatc	ctggccatca	gctctgacct	acacctccat	120
actcccatgt	acttctttct	ggccaacctg	tcattaactg	atgcctgttt	cacttctgcc	180
tccatcccca	aaatgctggc	caacattcat	accagagctc	agatcatctc	gtattctggg	240

tgtcttgcac	agctatatatt	cctccttatg	tttggtggcc	ttgacaactg	cctgctggct	300
gtgatggcat	atgaccgcta	tgtggccatc	tgccaaccac	tccattacag	cacatctatg	360
agteccccagc	tctgtgcaact	aatgctgggt	gtgtgctggg	tgctaaccac	ctgtccctgcc	420
ctgatgcaca	cactgtttgct	gacccgcgtg	gctttctgtg	cccagaaagc	catccctcat	480
ttctattgtg	atcctagtgc	tctcctgaag	cttgccctgct	cagataccca	tgtaaacgag	540
ctgatgatca	tcaccatggg	cttgctgttc	ctcactgttc	ccctcctgct	gacgtctctc	600
tcctatgtcc	gcattttctg	ggctgtgttt	gtcatctcat	ctcctggagg	gagatggaag	660
gccttctcta	cctgtgggtc	tcattctcacg	gtggttctgc	tcttctatgg	gtctcttatg	720
gggtgtgatt	tacttctccc	atcaacttac	tctacagaga	gggaaagtag	ggctgctgtt	780
ctctatatgg	tgattattcc	cacgctaaac	ccattcattt	atagcttgag	gaacagagac	840
atgaaggagg	ctttgggtaa	actttttgtc	agtggaaaaa	cattcttt		888

<210> 690

<211> 939

<212> DNA

<213> Unknown (H38g539 nucleotide)

<220>

<223> Synthetic construct

<400> 690

atgaagaggg	agaatcagag	cagtgtgtct	gagttcctcc	tcctggacct	ccccatctgg	60
ccagagcagc	aggctgtgtt	cttcaccctg	ttcttgggca	tgtacctgat	cacgggtgctg	120
gggaacctgc	tcattcatcct	gtcatccgg	ctggactctc	accttcacac	ccccatgttc	180
ttcttctca	gccacttggc	tctcactgac	atctcccttt	catctgtcac	tgteccaaag	240
atgttattaa	gcattgcaaac	tcaggatcaa	tccattcttt	atgcagggtg	tgtaactcag	300
atgtattttt	tcattatttt	cactgatcta	gacaatttcc	ttctcacttc	aatggcatac	360
gatcggtatg	tggccatctg	tcacccctc	cgctacacca	ctatcatgaa	agagggactg	420
tgtaacttac	tagtcaactgt	gtcctggatc	ctctcctgta	ccaatgccct	gtctcacact	480
ctcctcctgg	cccagctgtc	cttttgtgtg	gacaacacca	tccccattt	cttctgtgat	540
cttgttgccc	tactcaagct	ctcatgtcta	gacatctccc	tcaatgagct	ggtcattttc	600
acagtgggac	aggcagtcac	tactctacca	ctaataatgca	tcttgatctc	ttatggccac	660
attgggggtca	ccatcctcaa	ggctccatct	actaagggtca	tcttcaaagc	tttgtccacc	720
tgtggctctc	acctctctgt	ggtgtctctg	tattatggca	caattattgg	actgtatttt	780
ctccctcat	ccagtgcctc	cagtgacaag	gacgtaattg	cctctgtgat	gtacacgggtg	840
atcaccccat	tgttgaatcc	cttcatttat	agcctaagga	acagggacat	aaagggagcc	900
ctggagagac	tcttcaacag	ggcaacagtc	ttatctcaa			939

<210> 691

<211> 933

<212> DNA

<213> Unknown (H38g540 nucleotide)

<220>

<223> Synthetic construct

<400> 691

atggaaaacc	aatccagcat	ttctgaattt	ttcctccgag	gaatatcagc	gcctccagag	60
caacagcagt	ccctcttcgg	aattttcctg	tgtatgtatc	ttgtcacctt	gactgggaac	120
ctgctcatca	tcttgcccat	tggctctgac	ctgcacctcc	acaccccat	gtactttttc	180
ttggccaacc	tgtcttttgt	tgacatgggt	ttaacgtcct	ccacagttac	caagatgctg	240
gtgaatatac	agactcggca	tcacaccatc	tcctatacgg	gttgcctcac	gcaaatgtat	300
ttctttctga	tgttttggtga	tctagacagc	ttcttctctg	ctgccatggc	gtatgaccgc	360
tatgtggcca	tttgccaccc	cctctgctac	tccacagtca	tgaggcccca	agtctgtgcc	420
ctaattgctt	cattgtgctg	ggtcctcacc	aatatcgctg	ccctgactca	cacgttcttc	480
atggctcggt	tgtccttctg	tgtgactggg	gaaattgtct	actttttctg	tgacatcact	540
cctgtcctga	agctgtcatg	ttctgacacc	cacatcaacg	agatgatggg	ttttgtcttg	600
ggaggcaccg	tactcatcgt	ccccctttta	tgcattgtca	cctcctacat	ccacattgtg	660
ccagctatcc	tgagggtccg	aacccgtggg	gggggtgggca	aggccttttc	cacctgcagt	720
tcccacctct	cggtttttg	tgtgttctat	gggacctctc	tcagtgccta	cctgtgtcct	780
ccctccattg	cctctgaaga	gaaggacatt	gcagcagctg	caatgtacac	catagtgcac	840

cccatgttga acccctttat ctatagccta aggaacaagg acatgaaggg ggcctaaag 900
aggctcttca gtcacaggag tattgtttcc tct 933

<210> 692

<211> 945

<212> DNA

<213> Unknown (H38g541 nucleotide)

<220>

<223> Synthetic construct

<400> 692

atgggaggca agcagccctg ggtcacagaa ttcacccctg tgggattcca ggttgggtcca	60
gcactggcga ttctcctctg tggactcttc tctgtcttct atacactcac cctgctgggg	120
aatgggggtca tctttgggat tatctgcctg gactctaagc ttcacacacc catgtacttc	180
ttcctctcac acctggccat cattgacatg tcctatgctt ccaacaatgt tccaagatg	240
ttggcaaacc taatgaacca gaaaagcacc atctcctttg ttccatgcat aatgcagact	300
tttttgattt tggcttttgc tgttacagag tgcctgattt tgggtggtgat gtcctatgat	360
aggatatgtg ccatctgcca ccctttccag tacactgtca tcatgagctg gagagtgtgc	420
acgatccctg cctcaacatg ctggataatt agctttctca tggctctggt ccatataact	480
catattctga ggccgccttt ttgtggccca caaaagatca accactttat ctgtcaaatc	540
atgtccgtat tcaaattggc ctgtgctggc cctaggctca accaggtggt cctatatgcg	600
ggttctgcgt tcatcgtaga ggggccgctc tgcctggagc tggctctcaa cttgcacac	660
ctgtcgcgcc atcttgagga tccagtaatg gggagggccg cagaccgact tactcttct	720
gctccttccc acctttgcat ggtgggactc ctttttgcca gcaccatggt catgtacatg	780
gcccccaagt cccgccaccc tgaggagcag cagaaggtcc tttccctggt ttacagcctt	840
ttcaaccgga tgctgaaccc cttgatctac agcctgagga acgcagaggt caaggggtgcc	900
ctgaaaagag tgttgtggaa acagagatca aagtgagggg tgcca	945

<210> 693

<211> 575

<212> DNA

<213> Unknown (H38g542 nucleotide)

<220>

<223> Synthetic construct

<400> 693

ttgaagggtt attaaaaggc aatatgagtg cagaagcaag gtaagttttt tgtaataatt	60
ttttgttaat aatgtgaaat gtaaggaaaa aatatacaac tttagtttc tgactgtcct	120
gctagaaact agttttgccc tgcagcgacc cctctgtggg aatctcattg atgacaagtg	180
aaattctgga agtgctaaag ttagtttgcct caagttcact gctcatggat atgatcatga	240
tgggtgggtca acattcttct cttgccaatt aatcttccaa gggagtttag tttctgcatt	300
gtaatcttat ttttaaagag atcttatggt aatcttccaa gggagtttag tttctgcatt	360
tcctggatat atgggttttc gtatattgcc tggctataat ttttagagct ctttacaac	420
tcacaaagat atggggctca acaatgaatg aaattgtacg gtggatgtat tagtattaaa	480
cgtattagta ttaaattgtg tgacataaac tggctcttaa atataatcac aaattagtat	540
ctacaatgct tcaagcattg ttgtcctttt tgaaa	575

<210> 694

<211> 942

<212> DNA

<213> Unknown (H38g543 nucleotide)

<220>

<223> Synthetic construct

<400> 694

atggctgaag aaaatcatat catgaaaaat gagtttatcc tcacaggatt tacagatcac	60
cctgagctga agactctgct gtttgtgggt ttctttgcca tctatctgat caccgtgggtg	120
gggaatatta gtttgggtggc actgatattt acacaccgtc ggcttcacac accaatgtac	180

atctttctgg	gaaatctggc	tcttgtggat	tcttgcctgt	cctgtgctat	tacccccaaa	240
atgttagaga	acttcttttc	tgagaacaaa	aggatttccc	tctatgaatg	tgcagtacag	300
ttttattttc	tttgcactgt	ggaaactgca	gactgccttc	ttctggcagc	aatggcctat	360
gaccgctatg	tggccatagt	caacccactg	cagtaccaca	tcatgatgtc	caagaaactc	420
tgcattcaga	tgaccacagg	ggccttcata	gctggaaacc	tgcattccat	gattcatgta	480
gggcttgtat	ttaggttagt	tttctgtgga	tgaatcaca	tcaaccactt	ttactgtgat	540
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atcttctcag	gttcagttca	agtctttacc	ataggttagt	tcttaatatc	ttatctctat	660
attcttctta	ctattttcaa	aatgaaatcc	aaagagggaa	gggcaaagc	tttttctacc	720
tgtgcatccc	actttttgtc	agtttcatta	ttctatggat	ctcttttctt	catgtacgtt	780
agaccaaatt	tgcttgaaga	aggggataaa	gatataccag	ctgcaatttt	atttaacaata	840
gtagtccct	tactaaatcc	tttcatttat	agcctgagaa	ataggggaagt	aataagtgtc	900
ttaagaaaaa	ttctgatgaa	agaaataatc	tcaagaagat	gg		942

<210> 695

<211> 948

<212> DNA

<213> Unknown (H38g544 nucleotide)

<220>

<223> Synthetic construct

<400> 695

atgcaaggag	aaaacttcac	catttggagc	atttttttct	tggaggggatt	ttcccagtag	60
ccagggttag	aagtggttct	cttcgtcttc	agccttgtaa	tgtatctgac	aacgctcttg	120
ggcaacagca	ctcttatttt	gatacactatc	ctagattcac	gccttaaaac	ccccatgtac	180
ttattccttg	gaaatctctc	tttcatggat	atttgttaca	catctgcctc	tgttctctact	240
ttgctgggtga	acttgcctgc	atcccagaaa	accattatct	ttcttgggtg	tgtctgtacag	300
atgtatctgt	cccttgccat	gggctccaca	gagtgtgtgc	tcctggccgt	gatggcatat	360
gaccgttatg	tggccatttg	taacccgctg	agatactcca	tcacatgaa	caggtgcgtc	420
tgtgcacgga	tggccacggt	ctcctgggtg	acgggttgcc	tgaccgctct	gctggaaacc	480
agttttgccc	tgcagatacc	ccctctgtgg	aatctcatcg	atcaactcac	gtgtgaaatt	540
ctggcgggtgc	taaaagttagc	ttgcacaagt	tcactgctca	tgaacaccat	catgctgggtg	600
gtcagcattc	tcctcttgcc	aattccaatg	ctcttagttt	gcactcttta	catcttctac	660
ctttccacta	ttctgagaat	cacctcagca	gagggaagaa	acaaggcttt	ttctacctgt	720
ggtgcccatt	tgactgtggt	gattttgtat	tatggggctg	ccctctctat	gtacctaaag	780
ccttcttcat	caaatgcaca	aaaaatagac	aaaatcatct	cgttgcttta	cggagtgcct	840
accctatgt	tgaaccccat	aatttacagt	ttaagaaaca	aggaagtcaa	agatgctatg	900
aagaaattgc	tgggcaaaat	aacattgcat	caaacacacg	aacatctc		948

<210> 696

<211> 936

<212> DNA

<213> Unknown (H38g545 nucleotide)

<220>

<223> Synthetic construct

<400> 696

atgatgggta	gaaggaataa	cacaaatgtg	gctgacttca	tccttatggg	actgacactt	60
tctgaagaga	tccagatggc	tctgtttatg	ctattttctc	tgatatacct	aattactatg	120
ctgggggaat	tggggatgat	attgataatc	cgcttgacc	tccagcttca	cactccccatg	180
tatttttttc	ttactcacct	gtcattttat	gacctcagtt	actcaactgt	cgtcacacct	240
aaaaccttag	cgaacttact	gacttccaac	tatatctcct	ttacgggctg	ctttgcccag	300
atgttctttt	ttgccttctt	gggtactgct	gaatgttacc	ttctctctct	aatggcccat	360
gatcgctatg	cagcgatctg	cagtcctcta	cactacacag	ttattatgtc	caaaaggctc	420
tgcctcgctc	tcactactgg	gccttatgtg	attggcttta	tagactcctt	tgtcaacgtg	480
gtttccatga	gcagattgca	tttctacgac	tcaaacgtaa	ttcatcactt	tttctgtgac	540
acttccccaa	ttttagctct	gtcctgcact	gatacatata	acaccgaaat	cctgatattc	600
attattgttg	gttccaccct	gatgggtgct	cttttcacaa	tatctgcate	ctatgtgttc	660
attctcttta	ccatcctgaa	aattaattcc	acttcaggaa	agcagaaagc	tttctctact	720

tgctctctc atctcttggg agtcaccatc ttttatagca ctctgatttt tactttattta	780
aaaccaagaa agtccttattc cttgggaaga gatcaagtgg cttctgtttt ttatactatt	840
gtgattcccg tgctgaatcc actcatttat agtccttagaa acaaagaggt gaaaaatgct	900
gtcatcagag tcatgcagag aagacaggac tccagg	936

<210> 697

<211> 634

<212> DNA

<213> Unknown (H38g546 nucleotide)

<220>

<223> Synthetic construct

<400> 697

acaatgttct ataaaaattag tgctttgttc taatgttttg taccacttta ttttagtaaa	60
aattgagtaa gcaaaaaata tactgggttc tgactatctt tggcttttta gaggcattca	120
ttgccatgaa taaattataa aagttatata gttctctaata atgtttatat ttataaatat	180
gaatatttag ttctctaata tgtttatatt ttataaatatg aatatttctg tacattattt	240
cctaaaaatgt atttttttct tttgtatctg ttgtcttttag ctattaattt ttgatagttt	300
ttctacccat cctcctcttc cctacttta agaggcagat atctgtgcaa attcctagcc	360
atgtacact aatactacag cttcctgatg acactttttac attatcctca acttttgcct	420
ctcttattga ccctctgtat catcgatgct ctatggaaga ctgttcccta tgtacttaat	480
gctcagaaaa ttctcttgac acagacagga tggcctctgt cttctacaca gtagtcattc	540
ccatgttaaa ccattgatc tggagcccca ggaacaagga tgtgacattg ccctgaggaa	600
agtcatggtc aatagaaaac aggcattatt ttgc	634

<210> 698

<211> 682

<212> DNA

<213> Unknown (H38g547 nucleotide)

<220>

<223> Synthetic construct

<400> 698

tgcatgttct ccttttattt taatttttac cttttttttt cccacatgaa aggtcttgca	60
gtcacttaga aatgctgaga taaattgact ggtataaagt aaggtatctg attaatgaaa	120
tttactctaa aactaattgg ccttttcatg gactataaga ctatgcacaa ccacttcgta	180
ctcaaacatg caattctctt tccaatgttg tatgaccag taccagctc ttcaaagcac	240
attttttttt cttggtagat ctcaggtctt ccttctgttg ctgatggcct agacaactat	300
agggccatct gaaagtcctt gcagtatctg gttgtcatga agcaatggct gtgtgtgtg	360
ctgctggtgg tgccctgggc tggaggattt ttgcacacag taattcaact tggccttatt	420
catgggctcc catcttatga cccaatgtc attggtcgtt ttgtctgtga catggacccc	480
ttaatgaagc ttgtctgtga ctatacactc aacagatttg tctattttgc aggtcatgac	540
ttaaatacta ggttttatat atttcgttta tattcagact ggactgttct cttttggtga	600
tttgactttg gtatcctttt gtaatttttt ccctagagga catgattcta taaatcttgt	660
tatacatagt tattatccct gt	682

<210> 699

<211> 897

<212> DNA

<213> Unknown (H38g548 nucleotide)

<220>

<223> Synthetic construct

<400> 699

atggagccaa ggaaaaatgt gactgacttt gtcctcttgg gcttcacaca gaatccaaag	60
gagcagaaag tactttttgt tatgttcttg ctcttctaca ttttgaccat ggtgggcaac	120
ctgctcattg tagtgaccgt aactgtcagt gagaccctgg gctcaccaat gtccttcttt	180
cttgctggct taacatttat agatatcatt tattcttcat ccatttcccc cagattgatt	240

tcagacttgt	tctttgggaa	taattccata	tccttccaat	ctttcatggc	ccagctcttt	300
atcgagcacc	tttttggtgg	gtcagaggtc	tttctcctgt	tggtgatggc	ctatgaccgc	360
tatgtggcca	tctgtaagcc	cttgcatat	ttggttatca	tgagacaatg	ggtgtgtgtt	420
ttgctgctgg	tagtgtcctg	ggttggagga	tttctgcaat	cagtatttca	acttagcatt	480
atztatgggc	tcccattctg	tggtcccaat	gtcattgatc	attttttctg	tgacatgtat	540
cccttattga	aactggcctg	cactgacacc	catgttattg	gcctcttagt	ggtggccaat	600
ggaggactgt	cttgcaactat	tgcgtttctg	ctcttactca	tctcttatgg	tgtcatcctg	660
cactctctaa	agaaacttag	tcagaaaggg	aggcaaaaag	cccactcaac	ctgcagttcc	720
cacatcactg	tggttgtctt	cttctttgtt	ccttgtattt	ttatgtgtgc	tagacctgct	780
aggaccttct	ccattgacaa	atcagttagt	gtgttttata	cagtcataac	cccaatgctg	840
aaccccttaa	tctacactct	gagaaattct	gagatgacaa	gtgctatgaa	gaagctt	897

<210> 700

<211> 945

<212> DNA

<213> Unknown (H38g549 nucleotide)

<220>

<223> Synthetic construct

<400> 700

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aatctcaaca	gcgcaagagt	ggaattat	tctgtgtttc	ttcttgtcta	tctcctgaat	120
ctgacaggca	atgtgttgat	tgtgggggtg	gtaagggtg	atactcgact	acagaccctt	180
atgtacttct	ttctgggtaa	cctgtcctgc	ctagagatac	tgctcacttc	tgtcatcatt	240
caaagatgc	tgagcaat	cctctcaagg	caacacacta	tttcttttgc	tgcatgtatc	300
acccaattct	atctctactt	cttctctggg	gcctccgagt	tcttactgtt	ggctgtcatg	360
tctgcggtac	gctacctggc	catctgtcat	cctctgcgct	accccttgct	catgagtggg	420
gctgtgtgct	ttcgtgtggc	cttggcctgc	tgggtggggg	gactcgtccc	tgtgcttggt	480
cccacagtgg	ctgtggcctt	gcttcttttc	tgtaagcagg	gtgctgtggt	acagcacttc	540
ttctgcgaca	gtggcccact	gctccgctg	gcttgacaca	acaccaagaa	gctggaggag	600
actgactttg	ttctggcctc	cctcgtcatt	gtatcttctt	tgctgatcac	tgctgtgtcc	660
tacggcctca	ttgtgtctgg	agtcttgagc	atccccctctg	cttcaggccg	tcagaaggcc	720
ttctctacct	gtacctccca	cttgatagtg	gtgaccctct	tctatggaag	tgccattttt	780
ctctatgtgc	ggccatcgca	gagtggttct	gtggacacta	actgggcagt	gacagtaata	840
acgacatttg	tgacaccact	gttgaatcca	ttcatctatg	ccttacgtaa	tgagcaagtc	900
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<210> 701

<211> 772

<212> DNA

<213> Unknown (H38g550 nucleotide)

<220>

<223> Synthetic construct

<400> 701

gtactctgtg	tcatat	taaatgaaat	catcatataa	gtttattgag	tttttttgag	60
tacctaata	cttaataaaa	aaaatatggg	agcatatgta	gtaccatgct	tgtatcaata	120
cggataaagt	atctggaagt	ctttgctgag	aatctttttg	tgctgctgag	attattccac	180
tgatgtggat	ggtccatggc	tgttatgtga	ccgtctgtac	tacatgacca	tcgtgaatca	240
atataggtgt	agccatctca	ctggaatggc	atgtactgaa	agctttatcc	aggcacagtt	300
tagatcctct	ccccagtcctg	acttcccttc	tatgacocca	atgcatagc	tcattcatgt	360
gtgacttaaa	cactttttttg	aaactcctct	gcatgggtac	tactaataca	attggtttct	420
ttgttgctgc	caatgggtggg	ttcaactacc	tgtaaacat	cattttcttg	atggtttctt	480
aagtggccat	cctatgtact	ttgaaaactc	acagcttgga	ggaaagatgc	taaagttctc	540
tacctgcac	tctcacacca	ccatgggtcat	cttatctttg	agttctgtat	atctgtgtat	600
ctgtgcccag	tgacccttcc	ccaatcaata	aagcaatggc	tgtgtttcat	accgtgataa	660
atcctatgtt	aaaaccttta	gtctaaccct	cagaaatgca	gagggtgaaa	gtgctttgag	720
aaaggtctgg	gtcaaaaagt	gacctgaaga	gagaaataat	ctaaacataa	ga	772

<210> 702
 <211> 954
 <212> DNA
 <213> Unknown (H38g551 nucleotide)

<220>
 <223> Synthetic construct

<400> 702
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 ccaagacttg agttactctt ttttgtgctc atcttcataa tgtatgtggt catccttctg 120
 ggggaatggta ctctcatttt aatcagcatc ttggaccctc accttcacac ccctatgtac 180
 ttcttttctgg ggaacctctc cttcttggac atctgtctaca ccaccacctc tattccctcc 240
 acgctagtga gcttcctttc agaaagaaa accatttccc ttcttggtg tgcagtgcag 300
 atgttcctca gcttgcccat ggggacaaca gagtgtgtgc ttctgggcgt gatggccttt 360
 gaccgctatg tggctatctg caacctctctg agatatccca tcatcatgag taaggatgcc 420
 tatgtaccca tggcagctgg gtcctggatc ataggagctg tcaattctgc agtacaaaca 480
 gtgtttgtgg tacaattgcc tttctgcagg aataacatca tcaatcattt cacctgtgaa 540
 attctagctg tcatgaaact ggcctgtgct gacatctcag gcaatgagtt catcctgctt 600
 gtgaccacaa cattgttccct attgacacct ttgttattaa ttattgtctc ttacacgtta 660
 atcattttga gcatcttcaa aattagctct tctggaggga gaagcaaacc ttctctacc 720
 tgctcagctc gcttgactgt ggtgataaca ttctgtggga ccattcttct catgtacatg 780
 aagcccaagt ctcaagagac acttaattca gatgacttgg atgccactga caaacttata 840
 ttcatattct acaggggtgat gactcccatg atgaatcctt taatctacag tcttagaaac 900
 aaggatgtga aggaggcagt aaaacaccta ctgagaagaa aaaattttta caag 954

<210> 703
 <211> 999
 <212> DNA
 <213> Unknown (H38g552 nucleotide)

<220>
 <223> Synthetic construct

<400> 703
 atggaaaggga ccaattggac agagatagag ttcattctgc aaggactttc agggtagacca 60
 agagctgaaa aattcctttt cgtgatgtgc ttagtgatgt acctggtgat tctcctaggt 120
 aatggcacct tgatcattct gacactcctg gatgctcgtc tccacacacc catgtacttc 180
 ttccttggga atctttcctt cctagacatt tggtagacat cctcctccat cccctcaatg 240
 ctgatacact tcctatcaga gaagaaaacc atctccttca ctagatgtgt gattcaaagt 300
 tctgtctctt acactatggg atccaccgag tgtgtgcttc tagcagtgtat ggcataatgac 360
 cgttatgtag ccactctgaa cctctgaga tatcccatca tcatgggcaa ggcactttgt 420
 attcagatgg tggctgtctc ttggggacta ggctttctca actcattgac agaaactgtt 480
 cttgcaatac gggtaccctt ctgtggaaaa aaatgtcatt aatcattttg tttgtgaaat 540
 attggccttt gtcaagctgg cttgcacaga tacttccttg aatgagatta ttataatgtt 600
 gggcaatgta atatttttgt tttctccatt actgctgatt tgtatctcct acatctttat 660
 cctttctact gtactaagaa tcaattcagc tgaaggaagg aaaaaggcct tttccacctg 720
 ctgagccac atgacagtgg tgattgtgtt ttatgggaca atcctcttca tgtacatgaa 780
 ggcaaatgta aaagactctg cttttgacaa actgattgcc ctgttctatg gcatagtcac 840
 ccccatgctc aatcctatca tctatagcct gaggaatata gaggtgcatg gagctatgag 900
 gaaattaatg agtagaccct gggtctggag gaaatgatga cacactgaca cctttgagtt 960
 tatgcacaaa atacgctcac aagtttgaga caacacttt 999

<210> 704
 <211> 966
 <212> DNA
 <213> Unknown (H38g553 nucleotide)

<220>
 <223> Synthetic construct

<400> 704

cacacagagc	catggaatct	cacagatgtc	tgagaattcc	tcctcctggg	actctcagag	60
gatccagaac	tgcagccggt	cctcgctttg	ctctccctgt	ccctgtccat	gtgtctggtc	120
atgggtgctga	ggaacctgct	cagcatcctg	gctgtcagct	ctgtctctcc	cctccacacc	180
cccgtgtact	tcttcctctc	taaactgtgc	tgggctgaca	tcggtttcac	cttggccacg	240
gttcccaaga	tgattgtgga	catgcagtcg	catagcagag	tcattctctca	tgcgggctgt	300
ctgacgcaga	tgtctttctt	catccttttt	gcatgtatag	aaggcatgct	cctgacagt	360
atggcctatg	actgctttgt	agccatctgt	cgcctctctg	actaccag	catcgtgaat	420
cctcacctct	gtgtctcctt	ccttttggtg	tcctttttcc	ttagcatgtt	ggattcccag	480
ctgcacagtt	gaattgtgtt	acaattcaca	atcatcaaga	atgtggaaat	ctctaatttt	540
gtctgtgacc	cctctcaact	tctcaaactt	gcctgttctg	acagcgtcac	caatagcata	600
ttcatatatt	tcaatagtac	tatgtttggt	tttcttccca	tttcagggat	cctatggtct	660
tactgtaaaa	tgcgtccctc	cattctaagg	atttcatcat	cagatgggaa	gtataaagcc	720
ttctccacat	gtggctctca	cctagcagtt	gtttgctgat	tttatagaac	aggcattggc	780
atgtacctga	cttcagctgt	gtcaccaccc	cccaggaatg	gtgtgggtggc	gtcagcgatg	840
ttctctgtgg	tcaccccat	gctgaacctt	ttcatctaca	gcctgagaaa	cagggacata	900
caaagtgcc	tgcggaggct	gctcagcaga	acagtcgaat	cttatgatct	gttccatcct	960
ttttct						966

<210> 705

<211> 937

<212> DNA

<213> Unknown (H38g554 nucleotide)

<220>

<223> Synthetic construct

<400> 705

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aaggccctgc	agggccccc	gttctgggtg	gtgcttctgg	tctacctggt	caccttgctg	120
ggtaactccc	tgatcatcct	cctcacacag	gtcagccctg	ccctgcactc	ccccatgtac	180
ttcttctctg	gccaactctc	agtgggtggag	ctcttctaca	ccactgacat	cgtgcccagg	240
accctggcca	atctgggctc	cccgcatecc	caggccatct	ctttccagg	ctgtgcagcc	300
cagatgtacg	tcttcattgt	cctgggcate	tcggagtgt	gcctgctcac	ggccatggcc	360
tatgaccgat	atgttgccat	ctgccagccc	ctacgctatt	ccacctctt	gagcccacgg	420
gcctgcattg	ccatgggtgg	tacctcctgg	ctcacaggca	tcatacaggc	caccacccat	480
gcctccctca	tcttctctct	accttttctg	agccaccgga	tcataccgca	ctttctctgt	540
gacatcctgc	cagtactgag	gctggcaagt	gctgggaagc	acaggagcga	gatctccgtg	600
atgacagcca	ccatagtctt	cattatgate	cccttctctc	tgattgtcac	ctcttacatc	660
cgcatactgg	gtgccatcct	agcaatggcc	tccaccacga	gccgccgcaa	ggtcttctcc	720
acctgctcct	cccatctgct	cggtgggtctc	tctcttcttt	ggaacagcca	gcatcaccta	780
catccggccg	caggcaggct	cctctgttac	cacagaccgc	gtcctcagtc	tcttctacac	840
agtcatacaca	cccatgctca	accccatcat	ctacaccctt	cggaacaagg	acgtgaggag	900
ggccctgcga	cacttggtga	agaggcagcg	ccccctca			937

<210> 706

<211> 930

<212> DNA

<213> Unknown (H38g555 nucleotide)

<220>

<223> Synthetic construct

<400> 706

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cctgaattac	aagtcagtct	tttcttgatg	tttctcttca	tttatctatt	cactgttttg	120
ggaaacctgg	gactgatcac	gttaatcaga	atggattctc	agcttcacac	ccctatgtac	180
tttttctcta	gcaatttagc	atttattgac	atattttact	cctctactgt	aacacctaa	240
gcattgggtga	atttccaatc	caatcggaga	tccatctcct	ttgttggctg	ctttgttcaa	300
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aatcgctaca	tagcaatctg	caatccctta	ctgtattcag	tagtcatgtc	ccaaaaatg	420

tccaactggc	tgggagtaat	gccatatgtg	ataggcttca	caagctcgct	gatatctgtc	480
tgggtgataa	gcagtttggc	gttctgtgat	tccagcatca	atcatttttt	ttgtgacacc	540
acagctcttt	tagcactctc	ctgtgtagat	acattcggca	cagaaatggg	gagctttgtc	600
ttagctggat	tcactcttct	tagctctctc	cttatcatca	cagtcactta	tatcatcacc	660
atctcagcca	tctgaggat	ccagtcagca	gcaggcaggc	agaaggcctt	ctccacctgc	720
gcacccacc	tcatggctgt	aactatcttt	tatgggtctc	tgattttcac	ctatttgcaa	780
cctgataaca	catcatcgct	gacccaggcg	cagggtggcat	ctgtattcta	tacgattgtc	840
attcccatgc	tgaatccact	catctacagt	ctgaggaaca	aagatgtgaa	aaatgctctt	900
ctgagagtca	tacatagaaa	actttttcca				930

<210> 707

<211> 471

<212> DNA

<213> Unknown (H38g556 nucleotide)

<220>

<223> Synthetic construct

<400> 707

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ttaggggtgt	atataatagg	cctggtttgt	gcacagttc	atacaggctg	tatgtttagg	120
gttcaattct	gcaaatttga	tttgattaac	cattatttct	gtgatcttct	tcccctccta	180
aagctctctt	gctctagtat	ctatgtcaac	aaactactta	ttctatgtgt	tggtgcattt	240
aacatccttg	tcccagctt	gaccatcctt	tgctcttaca	tctttattat	tgccagcatc	300
ctccacattc	gtccactga	gggcaggctc	aaagccttca	gcactttagt	ctccacatg	360
ttggcggttg	taatcttttt	tggatctgca	gcattcatgt	acttgcagcc	atcttcaatc	420
agctccatgg	accaggggaa	agtatcctct	gtgttttata	ctattattgt	g	471

<210> 708

<211> 529

<212> DNA

<213> Unknown (H38g557 nucleotide)

<220>

<223> Synthetic construct

<400> 708

ctggccccgt	cctccagtct	ggccttgggg	acatggcggt	ggcaatggca	cagcatgact	60
gagcttggtt	tgttggtgct	ctcaggtttt	ggttccgtcc	ggggccttct	gttttgggca	120
gtgctctgca	aacatctggt	gaccctgctg	gacaactccc	tgatcgctcg	cctcgccctg	180
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cccaccggta	ggcggtctcc	cgctgctggg	tttcttcgcc	ctccctggca	tcgccgaatg	360
cgcttgcgca	gggccatggc	ctccgcgcgt	gtgacgcat	ctgccggccg	ctgcattcta	420
ctacctgagg	agccctagtc	ttccgagccc	gcttcgcctt	caccttgccc	ttctgcggcg	480
cagcaccacc	cgctacttcc	ggctggattc	tcggcctgtg	ctgagacct		529

<210> 709

<211> 942

<212> DNA

<213> Unknown (H38g558 nucleotide)

<220>

<223> Synthetic construct

<400> 709

atgaccagaa	aaaattatac	ctcactgact	gagttcgtcc	tattgggatt	agcagacacg	60
ctggagctac	agattatcct	ctttttgttt	tttcttgtag	tttatacact	tacagtactg	120
ggaaatctcg	ggatgatcct	cttaatcagg	atcgattccc	agcttcacac	acccatgtat	180
ttcttctctg	ctaacctgtc	ctttgtggac	gtttgtaact	caactaccat	caccccaaag	240
atgctggcag	atttattatc	agagaagaaa	accatctctt	ttgctggctg	cttctctacag	300

atgtacttct	ttatctccct	ggcgacaacc	gaatgcaccc	tctttgggtt	aatggcctat	360
gacaggtag	cggccatag	tcgcccgtg	ctttactcct	tgatcatgtc	caggaccgtc	420
tacctaataa	tggcagccgg	ggcttttgct	gcagggttgc	tgaacttcat	ggtcaacaca	480
agccatgtca	gcagcttgct	attctgtgac	tccaatgtca	tccatcactt	cttctgtgac	540
agtccccac	ttttcaagct	ctcttgttct	gacacaatcc	tgaagaaaag	cataagttct	600
attttggctg	gtgtgaatat	tgtggggact	ctgcttgtca	tcctctcctc	ctactcctac	660
gttctcttct	ccattttttc	tatgcattcg	ggggagggga	ggcacagagc	tttctccacg	720
tgtgcctctc	acctgacagc	cataattctg	ttctatgcca	cctgcaccta	tacttacctg	780
agacctagtt	ccagctactc	cctgaatcag	gacaaagtgg	cttctgtgtt	ctacacagtg	840
gtgattccca	tgttgaatcc	tctgatctac	agcctcagga	gtaaggaagt	aaagaaggct	900
ttagcgaatg	taattagcag	gaaaaggacc	tcttccttct	tg		942

<210> 710

<211> 941

<212> DNA

<213> Unknown (H38g559 nucleotide)

<220>

<223> Synthetic construct

<400> 710

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ctggagctac	agattatcct	ctttctgtta	tttcttgtga	tttacacact	taccgtactg	120
ggaaatatcg	ggatgatcct	cttaatcagg	atcgattccc	ggcttcacac	acccatgtat	180
ttcttctctg	ttaacctgtc	ctttgtggac	atttgttact	caaccacat	caccccaaag	240
atgctggcag	atttattatc	agagaagaaa	accatctctt	ttgctggctg	cttctacacg	300
atgtacttct	ttatcgccct	ggcgacaacc	gaatgcaccc	tctttgggtt	aatggcctat	360
gaccggtatg	tgaccatag	tcgcccgtg	ctttactcct	tgatcatgtc	caggacagtc	420
tgccataaaa	tggcagccgg	ggcttttgct	gcagggttgc	tgaactccat	ggtcaacact	480
agctatgtca	gcagcttgct	attctgtggc	tccaatgtca	tccatcactt	cttctgcaac	540
agtccccac	tttttaagct	ttcttgttct	gacacacact	tgaaggaaaag	catattttcc	600
acttttctctg	gtgtgaataa	ggtcggggct	ctgcttgtca	tcctctcctc	ctattctac	660
gttctcttct	ccattttttc	tatgcattca	ggggagggga	ggcacagagc	tttctccacg	720
tgtgcctctc	acctgacagc	cataatcctc	ttctacacca	cctccatcta	tacctacctg	780
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tgatcccat	attgaatcct	ctgatctaca	gcctcaggaa	taaggaagta	aagaaggctt	900
tagcgaatgt	aattagcagg	aaaaggatcc	cttcatttct	g		941

<210> 711

<211> 939

<212> DNA

<213> Unknown (H38g560 nucleotide)

<220>

<223> Synthetic construct

<400> 711

atgagtgggg	agaatgtcac	caagggtcagc	accttcatcc	tggtgggcct	ccccacggcc	60
ccagggtctg	agtacctgct	cttctcctc	ttcctgtctc	cctacctctt	tgtcctgggtg	120
gagaacctgg	ccatcatcct	catcgtctgg	agcagcacct	ccctccacag	gcccattgtac	180
tactttctga	gtcccatgtc	tttcttgagg	atctgggtacg	tgtctgacat	cacccccaag	240
atgctggagg	gttctcctct	ccagcagaaa	cgcactctct	tcgtcgggtg	catgacgcag	300
ctctacttct	tcagctccct	ggtgtgcacc	gagtgtgtgc	ttctgcctcc	atggcctacg	360
accgctacgt	ggccatctgc	caccgcgtgc	gctaccacgt	ccttgtgacc	gccgggctgt	420
gctccagctg	gtgggcttct	cctttgtgag	tgttctctca	tctccatgat	caagggtctgt	480
tttatctcca	gcgtcacgtt	ctgtggctcc	aacgtcttga	acccacttct	tctgtgacat	540
ttcccccatc	ctcaagctgg	cctgcacgga	cttctccact	gcagagctgg	tgatttcac	600
ctggccttca	tcatectggg	gtttccgctc	ctggccacca	tactgtcata	ttggcacatc	660
accctggctg	tcctgcgcac	cccctcggcc	accggctgct	ggagagcctt	ctctacctgc	720
gcctctcacc	tcaccgtggg	caccgtcttc	tatacagcct	tgcttttcat	gtatgtccgg	780
ccccaaagcca	ttgattccca	gagctccaac	aagctcatct	ctgccgtgta	cactgttgtc	840

acgccataa ttaacccttt gatttactgc ctgaggaaca aggaatttaa ggacgccttg 900
 aaaaaggcct tgggcttggg tcaaacttca cactaagac 939

<210> 712

<211> 642

<212> DNA

<213> Unknown (H38g561 nucleotide)

<220>

<223> Synthetic construct

<400> 712

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agaaagaagg	tcattgtatt	cacactgtgc	gcagctcgac	ttctctttct	cctcattggg	120
gggtgtaccc	agtgcgccct	tcttggagtg	atgtcctatg	atcgctatgt	tgcaatctgc	180
aatcctctgc	gttaccctaa	catcatgacc	tggaaagtgt	gtgtccagct	ggcaacagca	240
ccatggacca	gtggtattct	ggtgtctgtg	gtagacacca	ccttcacact	gaggctaccc	300
taccgaggca	gtaacagcat	tgtcatttcc	tgggtgtgagg	cccctgcaact	attgatctta	360
gcattccacag	acacccatgc	atcagagatg	gccatttttc	ttacgggggt	tgtgattctc	420
ctcatacctg	tttttctgat	tctggtatcc	tatggccgta	tcataagtaac	tgtgggtcaag	480
atgaagtcaa	ctgtggggag	tctcaaggca	ttttctacct	gtggctccca	cctcatggtg	540
gtcatacttt	tttatggatc	agcaattatc	acttacatga	caccaagtc	ttccaaacag	600
caggaaaaat	cgggtgtctgt	tttctatcca	atagtgtactc	cc		642

<210> 713

<211> 948

<212> DNA

<213> Unknown (H38g562 nucleotide)

<220>

<223> Synthetic construct

<400> 713

atgttggaga	gtaattacac	catgccaaact	gagttcctat	ttgttggatt	cacagattat	60
ctacctctca	gagtcacact	gttcttggta	ttccttcttg	tatatacatt	aactatggtc	120
ggaaatatac	tcttaataat	tctagttaat	attaattcaa	gccttcaa	tcccatgtat	180
tattttctta	gcaacttata	tttcttagac	atcagctgtt	ctacagcaat	cactcctaaa	240
atgtctggcaa	acttcttggc	atccaggaaa	agcatctctc	cttatgggtg	tgactataaa	300
atgtttttct	tcgcttcttt	tgtgatgtct	gagtgcctta	tcctggcagc	aatggcttat	360
gaccgctatg	cagccatctg	caacccactg	ctctatacta	cactgatgtc	taggagagtc	420
tgtgtctgct	tcatttgtgt	ggcatatttc	agtggaaagta	caacatcact	ggtccatgtg	480
tgccatcatc	tcaggctgtc	attttgtggc	tccaatatcg	tcaatcattt	tttctgtgat	540
atccacctc	tcttggcttt	atcatgtaca	gacactcaga	tcaaccagct	tctgtctttt	600
gctttgtgca	gcttcatcca	gaccagcact	tttgtggtaa	tatttatattc	ttacttctgc	660
atcctcatca	ctgtgttgag	catcaagtcc	tcagggtggca	gaagcaaaac	attctccact	720
tgtgcttccc	acctcatagc	agtcacctta	ttctatggag	cgctcctgtt	tatgtactta	780
cagcccacca	ctagctattc	cctagacact	gataagggtg	tggcagtggt	ttatactgtt	840
gtatttccca	tgtttaatcc	aataatttat	agtttcagaa	acaaggatgt	gaaaaatgct	900
ctcaaaaagc	tattagaaaag	aattggatat	tcaaatgaat	ggtatttta		948

<210> 714

<211> 939

<212> DNA

<213> Unknown (H38g563 nucleotide)

<220>

<223> Synthetic construct

<400> 714

atgtcaaccc	acagaaatgg	aaatctctca	gtggttcctt	tgtgggagag	catgctgaag	60
ggacttgagg	gtggcctgga	gaaccaggcc	ctgctctttg	ctgtgttccc	aggtctatac	120

atggtgacca	tcccgggaaa	cctcaccatg	accatgggtca	tcatectgga	cacgcacctg	180
cacttcccag	tgaacttctt	cctcaggagc	ctcccccttc	ctggaccttg	gccatgcctc	240
catcacccca	atgccctggg	taacttctct	ctctcggtca	aggtcgtcac	ctttgcaggc	300
tgtgctgccc	ggttcttttt	ctccttgetg	tctaccactg	agactttcct	gctggccgtg	360
atggcctatg	actgcttctg	ggccatctgt	agtctgggtg	gggtgccagt	gaccacgtgc	420
ctctcgatct	gcacatcctt	gggaccaggc	acctactgca	gggtctgcct	cagctccatc	480
gtgcagaccg	gcctcatgtt	ccagctccct	tctgcaggga	ccaaccacat	tgaccactct	540
gtgacatgcc	ccagctgctc	cggctggcct	gtgcatgcct	ggccctcaat	gagctgacca	600
agttcagcct	ttgtgggctc	atgatgggaa	cgccactctt	gtggctcctg	tctccttttg	660
ctgtgtcaca	gtgaccatcc	tgaggacacc	ctccgcagcc	agtgacataa	ggctctcacc	720
tgtagctccc	acgtgatgac	cgtgtccctg	tttgatggga	ctgtgtttgt	cacatatgcc	780
cagccaggga	ctatggagtc	catggagcag	ggcaagggtg	tgtctgtctt	ctacagcctg	840
gtcatcccga	tgcttggccc	cttcatctac	agcctacgaa	acaaggacat	gaaggaggcc	900
ctgcggaggc	tgggcccagag	acaagcactc	atgggaagg			939

<210> 715

<211> 756

<212> DNA

<213> Unknown (H38g564 nucleotide)

<220>

<223> Synthetic construct

<400> 715

atgtacttct	tccttggcaa	cctctccttt	tgtgatattct	gctactctac	tgtcttttct	60
cctaagatgc	tagtcaattt	cctatcaaaa	cataagtcca	gtacattttc	tggctgtgtt	120
ctacagagtt	tcccttttgc	agtatatgta	accacaaagg	acattctcct	gtccatgatg	180
gcttatgacc	attacgtggc	catagctaatt	cccttggtgt	atacagtcac	tatggcccaa	240
aaagtttgta	ttcagatggg	ccttgcttct	tacttaggtg	ggctcattaa	ttccctgaca	300
cacacaatag	gtttgctcaa	attagacttc	tgtgggtccta	atattgtgaa	tcattatttc	360
tgtgatgttc	ctcctcttct	gaggctttct	tgtctgtatg	ctcatatcaa	tgaaatgctg	420
cccttgggtc	tctctgggct	cattgcaatg	ttcactttca	ttgtcattat	gggtgtctat	480
atctgcatca	tcattgccat	ccagagaatc	catgcagctg	agggaaaggta	caaagccttc	540
tccacttggt	tctcccacct	aaccacgggt	accttattct	atgggtctgt	ttcttttagt	600
tatatccagc	caagttctca	gtattccttg	gaacaggaga	aggtcttggc	tgtgttttat	660
acactgggtg	tccccatgct	aaaccactt	atztatagcc	tgagaaataa	ggatgtaaaa	720
gatgcagcca	aaaggttgat	atggtggggg	gaaaaa			756

<210> 716

<211> 954

<212> DNA

<213> Unknown (H38g565 nucleotide)

<220>

<223> Synthetic construct

<400> 716

atgagtgggg	agaatgtcac	cagggtcggc	accttcatcc	tgggtgggctt	ccccacggcc	60
ccagggtctg	agtacctgct	cttctctctc	ttcctgctca	cctacctctt	tgtcctgggtg	120
gagaacctgg	ccatcatcct	caccgtcttg	agcagcacct	ccctccacag	gcccatgtac	180
tactttctga	gtcccatgtc	tttcttagag	atctgggtacg	tgtctgacat	cacccccaa	240
atgctggagg	gcttctctct	ccagcagaaa	cgcactctct	tcgtcgggtg	catgacgcag	300
ctctacttct	tcagctccct	gggtgtgcac	gagtggtgct	ttctggcctc	catggcctac	360
gaccgctacg	tggccatctg	ccaccgctg	cgctaccacg	tccttgtgac	cccgggctgt	420
gcctccagct	gggtgggctt	tcctttgtga	gtggcttcac	catctccatg	atcaaggctt	480
gtttttatct	cagcgtcacg	ttctgtggct	ccaacgtctt	gaaccacttc	ttctgtgaca	540
tttcccccat	cctcaagctg	gectgcacgg	acttctccac	tgcagagctg	gtggatttca	600
ttctggcctt	catcatcctg	gtgtttccac	tcctggccac	catgctgtca	tatgagcaca	660
tcacctggc	tgtcctgcgc	atccctctgc	caccggctgc	tggagagcct	tcttcacctg	720
cgctctcac	ctcaccgtgg	tcaccgtctt	ctatacagc	ttgcttttca	tgtatgtccg	780
ccccaggcca	ttgattcccg	gagctccaac	aagctcatct	ctgtttttga	cacagtatc	840

acccccatct tgaaccctt gatatactgc ctgaggaata aggaatttaa gaatgccttg 900
 aaaaacagtc ggcttgacga ctgcgccgta gaggggaggc tttctagtct tctg 954

<210> 717

<211> 960

<212> DNA

<213> Unknown (H38g566 nucleotide)

<220>

<223> Synthetic construct

<400> 717

atggctgatg ttaatcttac attgggtact gagtttatcc ttttggaact gacagatcgt	60
gctgaactga agatggctct cttcgtgttg ttctgtctga tctacacccat ttccctgggtg	120
ggaaatatag gaatgctctt tctaattctat gtaactccca aactccacac acccatgtat	180
tatttctca gctgtctgtc atttggtgat gcctgctatt catcagtttt tgcaccaga	240
atgctgctga acttctttgt tgagcgggag acaatcttat tctctgcatg tattgtgcag	300
tattttttat tctgtctctt ccttaccact gagggcttct tgctggccac aatggcttac	360
gaccgttaca tggccattgt gaacccttta ctttatacag tagctatgac taaaatagtt	420
tgtattgtgc tgcgatttgg gtcattgtat ggaggtttta tcaactcatt gacacatata	480
attggcttgg tgaactgtc tttctgtggg ccaaagtgtc tcagtcactt cttctgtgat	540
cttccccac tgttgaagct gtcattgtct gagacatcta tgaatgaatt gttgcttttg	600
atcttctctg gcattattgc cacgtcact tttttgactg tggtgatctc ctacatcttc	660
attgttctgt ctatcctgag gatccgctaa gcagcaggta gacgtaaagc cttctccacc	720
tgcacctctc acctgattac cgtgacctta ttctatggat cgataagctt tagttacatt	780
cagccaaact cccagtattc cctagaacaa gaaaagggtg tgtctgtatt ttataacctg	840
gtgggtccta tgttaaacc attgatttac agcctaagga acaaggaagt gaaggaagct	900
gtgaaaaggg ctatagaaat gaaacatttt cttgtttaat ttcattttc catatccaaa	960

<210> 718

<211> 938

<212> DNA

<213> Unknown (H38g567 nucleotide)

<220>

<223> Synthetic construct

<400> 718

atgttgggga attactctag cgccactgaa ttttttctct taggttccc tggtcccaa	60
gaagtacgcc gtatcctttt tgtgaacttc ttcttcttgt acgcagtgc agtgatggga	120
aacacgggtca tcatcgtcac tgtctgtgtt gataaacatc tgcagtcacc catgtatttt	180
ttcttggggc acctctgtgt cctggagatc ctgatcacat ccaccgtgc cccttttatg	240
ctgggggggt gctgcttcca agcaccaga tcatgtcttt gacagcctgt gctgcacagc	300
tatatacctt tctttgggta cctcggagtt ggcattaatg ggagtgatgg ctgtggacca	360
ttatgtggct gtgtgtaacc ctttgaggta caacatcatt atgaacagca gcacatgtgt	420
ctggatggtc attgtatcat ggggtgtttg gttccttttt caaatctggc cagtttatgc	480
cacttttcag ctactttct gcaaatcaaa tgtgttagat catttttact gtgactgagg	540
acaattgctc aagggtatcct gtgaggacac tcttttcaca gagtttatte tttttcta	600
ggctgttttc attatcattg gttcttttga tccctacgat tgtctcctac acctacatca	660
tctccaccat cctcaagatc ccgttagcct ctggctggag gaaatccttt tccacttgtg	720
cctccactt cacctgtgtt gtgatcggct acagcagctg cttgtttctc tacacgaaac	780
ccaagcaaac acaggcagcc aagtataacc ggatagcgtc actgctggtt ttagtggtga	840
ccccttttct gaacctttc atcttcacce tgaggaatga caaattcata caggcctttg	900
gagatggcat gaaacactgc tatcaactcc tcagaatt	938

<210> 719

<211> 942

<212> DNA

<213> Unknown (H38g568 nucleotide)

<220>

<223> Synthetic construct

<400> 719

atataaatgg	ctgacagaaa	tgtcactgtg	ataactgaat	tcacccctcct	ggggttgact	60
gataaccctg	aatgaatgt	tgtcctttct	gtgctctttc	tattaatcta	tctcattact	120
gtcttgggca	acttttggat	tatcataata	attctggcta	gtgcccaact	ccattcaccc	180
atgtactttt	tccttagcca	gttggcttct	ttagatttct	gctattcttc	agtcttgatt	240
cctaaaatgt	tgggtgaatta	catagcagga	cagaaagtca	tctcttatca	cggttgcctc	300
cttcagtatt	cctttgtcag	cttgttccctg	actactgaat	gcttccctcct	ggctgccatg	360
gcatgtgac	ggtatctcgc	tgtttgccac	ccacttcact	acaaaggtct	catgactcct	420
actttctgaa	tctatttggg	gactgtttct	tacctgctgg	gctctgtaaa	ctccctcacc	480
cacctgagta	gcttactcag	tttgtcttct	tgtgggtcca	atgttatcaa	cgttatttct	540
tgtgacattc	cattgtctct	ccaactctcc	tgttccaaca	cccaacacag	taagatttta	600
tttactgtcc	tttctggagc	aacatcagtg	actacctttt	tgatagtggg	tagttcctat	660
ctggtaatcc	tactcattgt	cctgaagata	cattccacca	ggggcagaaa	taaagccata	720
tccacatgtg	cctcccaact	aatggtagtg	actctcttct	acagaacagt	gatatttact	780
tatctgggag	ccaaccctgg	atactcacag	gatagaccca	aaattctgcc	tgtggagtgc	840
acacttttgt	tgtcaatact	aaatcttcta	atatatagcg	tgagaaacag	agaagtcaaa	900
gaagccataa	aaataattat	taagagaaaa	atacttccct	ag		942

<210> 720

<211> 942

<212> DNA

<213> Unknown (H38g569 nucleotide)

<220>

<223> Synthetic construct

<400> 720

atgttgatga	attactctag	tgccactgaa	ttttatctcc	ttggcttccc	tggctctgaa	60
gaactacatc	atatectttt	tgtatatttc	ttctttttct	acttgggtgac	attaatggga	120
aacacagtc	tcacatgat	tgtctgtgtg	gataaacgct	tgcagtcccc	catgtatttc	180
ttcctcggcc	acctctctgc	cctggagatc	ctgggcacaa	ccataatcgt	ccccgtgatg	240
ctttggggat	tgtctgtccc	tgggatgcag	acaatatatt	tgtctgcctg	tgttgtccag	300
ctctctctgt	accttgtctg	ggggacaaca	gagttcgcct	tacttggagc	aatggctgtg	360
gaccgttatg	tggctgtctg	taaccctctg	aggtacaaca	tcattatgaa	cagacacacc	420
tgcaactttg	tggttcttct	gtcatgggtg	tttgggttct	tttttcaa	ctggccggtc	480
tatgtcatgt	ttcagcttac	ttactgcaaa	tcaaagtgtg	tgaacaattt	tttttgtgac	540
cgagggcaat	tgtcaaaact	atcctgcaat	aatactcttt	tcacggagtt	tatcctcttc	600
ttaatggctg	tttttgttct	ctttgggtct	ttgatcccta	caattgtctc	caacgcctac	660
atcatctcca	ccattctcaa	gatcccgctc	tcctctggcc	ggaggaaatc	cttctccact	720
tgtgcctccc	acttcacctg	tgttgtgatt	ggctacggca	gctgcttgtt	tctctacgtg	780
aaacccaagc	aaacgcaggc	agctgattac	aattgggtag	tttccctgat	ggtttcagta	840
gtaactcctt	tcctcaatcc	tttcatcttc	acctccggga	atgataaagt	catagaggcc	900
cttcgggatg	gggtgaaacg	ctgctgtcaa	ctattcagga	at		942

<210> 721

<211> 936

<212> DNA

<213> Unknown (H38g570 nucleotide)

<220>

<223> Synthetic construct

<400> 721

atgatgggta	gaaggaatga	cacaaatgtg	gctgacttca	tccttacggg	actgtcagac	60
tctgaagagg	tccagatggc	tctgtttatg	ctatttctcc	tcataacct	aattactatg	120
ctgggggaatg	tggggatgct	attgataatc	cgcctggacc	tccagcttca	cactcccatg	180
tattttttcc	ttactcacct	gtcattttatt	gacctcagtt	actcaactgt	cgtcacacct	240
aaaaccttag	cgaacttact	gacttccaac	tatatttctc	tcacgggctg	ctttgccag	300
atgttctgtt	ttgtcttctt	gggtactgct	gaatgttate	ttctctctc	aatggcctat	360

gatcgctatg	cagcgatctg	cagtcctcta	cactacacag	ttattatgcc	caaaaggctc	420
tgccctcgctc	tcatcactgg	gccttatgtg	attggcttta	tggactcett	tgtcaatgtg	480
gtttccatga	gcagattgca	tttctgtgac	tcaaacataa	ttcatcactt	tttctgtgac	540
acttccccaa	tttttagctct	gtcctgcaact	gacacagaca	acactgaaat	gctgatattc	600
attatcgctg	gttccaccct	gatgggtgcc	cttatcacia	tatctgcac	ctatgtgtcc	660
attctctcta	ccatcctgaa	aattaattcc	acttcaggaa	agcagaaagc	tttctctact	720
tgcgctcttc	atctcttggg	agtcaccatc	ttctatggaa	ctatgatttt	tacttactta	780
aagccaagaa	agtcttattc	cttggaaga	gatcaagtgg	ctcctgtgtt	ttatactatt	840
gtgattccca	tgctgaatcc	actcatttat	agtcttagaa	acagagaagt	gaaaaatgct	900
ctcattagag	tcatgcagag	aagacaggac	tccagg			936

<210> 722

<211> 730

<212> DNA

<213> Unknown (H38g571 nucleotide)

<220>

<223> Synthetic construct

<400> 722

atgtcatgat	gaattttctg	cctgccaaaa	ataatcatta	ctttattgca	gtaggagtgg	60
gatgctttta	atttagagac	acgggttttt	ctggaagagg	acttcccatg	tggattcagc	120
ttgtggattg	tacgtcaatt	gtcttttttc	ttggaataaa	attaatttgc	tcatttaaaa	180
aaatgatgca	ggaagcatac	gagtactttt	tctctgagca	acttggcttt	ttaagtttct	240
gttatgtctc	agtcattaca	tccaaaatgt	ttggaagtgt	cttgtacaaa	caaaaaaaat	300
taaccttcaa	tgcacatagg	ctgtctcttc	accttcatga	ccaccgagtg	cttgctctag	360
ctttcatggc	ctgtgatcaa	tacctgggtc	tttgtaatcc	tcctttgtat	atgggtcacca	420
tgtccccccc	gcaaggagtc	tgcattcagc	ttatgcctgc	ctcctatagc	tatagcttcc	480
tgatgacact	ttcacattat	cctcagcctt	tgtctccctt	attgccccct	tgtatcattg	540
atgttcaatt	gaagcctggt	ccttatgtac	ttaatgctca	gaaaattctc	ttgacacaga	600
caggatggcc	tctgtcttct	acacagtagt	cattcccatg	tgagccctt	tgatctggag	660
cctcaggaac	aaggatgtga	aagatgccct	gaggaaagtc	attgtcaaca	gaaaccaggc	720
attattttgt						730

<210> 723

<211> 936

<212> DNA

<213> Unknown (H38g572 nucleotide)

<220>

<223> Synthetic construct

<400> 723

atggctcctg	aaaatttcac	cagggtcact	gagtttatct	tcacaggtgt	ctctagctgt	60
ccagagctcc	agattcccct	cttcctgggt	ttcctagtgc	tctatgtgct	gaccatggca	120
gggaacctgg	gcatcatcac	cctcaccagt	gttgactctc	gacttcaaac	ccccatgtac	180
tttttcctga	gacatctagc	tatcatcaat	cttggaact	ctactgtcat	tgccccataa	240
atgctgatga	acttttttagt	aaagaagaaa	actacctcat	tctatgaatg	tgccacccaa	300
ctgggagggg	tcttgttctt	tattgtatcg	gaggtaatga	tgctggctgt	gatggcctat	360
gaccgctatg	tggccatttg	taacctctcg	ctctacatgg	tggtgggtgc	tcggcggtc	420
tgccctcctg	tggtgtccct	cacgtacctc	tatggctttt	ctacagctat	tgtggtttca	480
ccttgtatat	tctctgtgtc	ttattgtctc	tctaataata	tcaatcattt	ttactgtgat	540
attgcacctc	tgtagcatt	atcttgcctc	gatacttaca	taccagaaac	aatagtcttt	600
atatctgcag	caacaaattt	gtttttttcc	atgattacag	ttctagtatc	ttattttcaat	660
attgttttgt	ccattctaag	gatacgttca	ccagaaggaa	ggaaaaaagc	cttttccacc	720
tgcgcttcgc	atatgatagc	agtcacgggt	ttctatggga	caatgctatt	tatgtatttg	780
cagccccaaa	ccaaccactc	actggatact	gataagatgg	cttctgtgtt	ttacacattg	840
gtgattccta	tgtgaatcc	cttgatctac	agcctgagga	ataatgatgt	aaatgttgcc	900
ttaaagaaat	tcatggaaaa	tccatgttac	tccttt			936

<210> 724

<211> 481
 <212> DNA
 <213> Unknown (H38g573 nucleotide)

<220>
 <223> Synthetic construct

<400> 724
 atatgtggga gtcacagtgg tgttactgaa ttttgtctct taggcttccc tggctcccag 60
 taagtatgcc atttggtacc ttcttccttt gtcagtgatt gtaataagaa attatgtaat 120
 catcatagta tgtgttgaga aatgcctgct gtccctccta tatttattct atgggtgacct 180
 ctctgtcatg gaaatcctta tcacatatac tgctgttccc ttgatgctca ggggttggtta 240
 ctttccatga ttcaaacat acctttaatg acatgtgctg tccaactcta tatgaacttt 300
 tttgggggta cacaaaattt gcattactgg gagtgatgac tgtgaaccat tatgtggctc 360
 tctgtaactc tttgaagtaa aacatcatta tgagcagaca cactgcatct ggctggtaat 420
 tgtattattg attgggttcc tttctgaaat ctggtcagtc tatgccacat ttcagctccc 480
 t 481

<210> 725
 <211> 971
 <212> DNA
 <213> Unknown (H38g574 nucleotide)

<220>
 <223> Synthetic construct

<400> 725
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 gatccagaac tgcagccggc cctcgctttg ctgtcccgtt ccctgtccat gtatctgggc 120
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 cccatgtact tcttcctctc caacctgtgc tgggctgaca tcgggtttcac ctcggccatg 240
 gttcccaaga tgattgtgga catgcagtcg catagcagag tcatctctca tgagggtgc 300
 ctgacacaga tgttttttct ggtccttttt gcatgtatag aaggcatgat cctgactgtg 360
 atggcctatg actgctttgt agccatctgt cgccctctga attaccagc catcgtgaat 420
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 ctgcacagtt ggattgtgtt acaattcaca atcatcaaga atgtggaaat ctctaatttt 540
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 atgtacctga cttcagctgt gtcaccacct cccaggaatg gtgtagtggc gtcaatgatg 840
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 caaagtgcct tgcggaggct gcgcagcaga acagtcgaat ctcatgatct gttccatcct 960
 ttttcttgtg t 971

<210> 726
 <211> 960
 <212> DNA
 <213> Unknown (H38g575 nucleotide)

<220>
 <223> Synthetic construct

<400> 726
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 tgcttcttcc tctccaacct gtgctgggct gacatcggtt tcacctcggc cactggttctt 240
 aagatgattg tggacatgca gtcgcatagc agagtcactt cttatgaggg ctgcctgaca 300
 aggatgtctt tcttggctct ttttgcattg acagaagaca tgcttctgac tgtgatggcc 360
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ctctgtgtct	ttttcat	ttt	gggtgccttt	ttccttagcc	tgttggattc	ccagctgcac	480
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gagccatctc	aacttgtaaa	ccttgccagt	tctgacagcg	tcgtcaatag	catattcata		600
tatttcgata	gtactatgtt	tgggtttctt	cccatttttag	gggtcctttt	gtctcactat		660
aaaattgtcc	cctccattct	aaggatttca	tcgtcagatg	ggaagtataa	agtcttcgct		720
acctgtggct	ctcacctggc	agttgtttgc	tgatttgatg	gaacaggcat	tgacatgtac		780
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<210> 727

<211> 806

<212> DNA

<213> Unknown (H38g576 nucleotide)

<220>

<223> Synthetic construct

<400> 727

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aaactagact	cccacctata	cacacctgtt	gtatatTTTT	taatcaaaca	catatttttc	120
attgattttt	acaattgtat	tgttattttac	accaataaaa	tgtaaatttt	tgttgtggat	180
cagaataaaca	tttccattta	tgcattgtgc	acacatatga	ctttcttatg	ttcattatca	240
ctgaactttt	aattcttgga	agcatggcct	atgattgcta	tgtgggtgaa	tccaaccctt	300
tgtttttacat	tgttatcatg	tgtctgtgac	tgtaacatgt	gctgatgagc	attccatacc	360
tctgtaatac	atttcaatct	ctaattatca	caatgacctt	tttttgacct	tctgtagctt	420
tatcatcagt	catttctatt	gttatgatgt	tctcttcttc	catatgctat	gctcaaagtc	480
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ggatctctac	tttttgatat	ggataaatgg	cctccttggt	ctacacttta	atgatctcca	720
ggtttaacct	cttgatctac	agcttttagca	acttaggggt	taaaaatgtc	ttttatagag	780
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<210> 728

<211> 384

<212> DNA

<213> Unknown (H38g577 nucleotide)

<220>

<223> Synthetic construct

<400> 728

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gagatggaga	tctttctctc	ttgcatcttc	tcgcgatttt	atgccttcag	tctactgagg	120
aatggcatga	acatgggact	cacctatctg	gatgacagag	acgacagact	acacaccctc	180
atatacattt	tcctctcaca	cctggccatc	aatgacatgt	actatgcttc	caacaatgtt	240
ccaaagaggc	aggtgaacca	aatgaaccag	aaaaaaaaaa	actttgttct	atggataaag	300
cagatatttt	tgtattttggc	ttttgctcac	acagagtgcc	taatttaggc	aatgatgtcc	360
tgtaatagat	atgtggcaat	ctgc				384

<210> 729

<211> 921

<212> DNA

<213> Unknown (H38g578 nucleotide)

<220>

<223> Synthetic construct

<400> 729

atgggccaac	acaatctaac	agtgctaact	gaattcattc	tgatggaact	cacaaggcgg	60
------------	------------	------------	------------	------------	------------	----

cctgagctgc	agattcccct	ttttggagtc	tctctcgctca	tctacctaata	cacagtgggtg	120
ggcaacctaa	ctatgatcat	tttgaccaaa	ctggactccc	acttacatac	acctatgtac	180
ttttctatca	gacatttggc	ttctgttgat	cttggttaatt	ctactgtcat	ttgtcccaag	240
gtgctggcaa	attttgttgt	ggatcgaaat	actatttcct	attatgcatg	tgctgcacag	300
ctggcattct	tccttatgtt	cattatcagt	gaatttttca	tcctgtcagc	catggcctat	360
gaccgctatg	tggccatttg	taaccctctg	ctctattatg	ttattatgtc	tcagcgactg	420
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gatgttcctt	tgctacctat	gctttgctca	aatgcacagg	aaatagaatt	gttgagcata	600
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attttgttag	ctatatgtca	aatgcattct	gcagagggca	ggaaaaaggc	tttcttcaca	720
tggtggtccc	atttgacagt	gggtggtgtg	ttctatgggt	ctctactctt	catgtacatg	780
cagcccaatt	ccactcactt	ctttgatact	gataaaatgg	cttctgtgtt	ttacacttta	840
gtaatcccca	tgcttaacct	tttgatttac	agcttaagaa	acgaagaggt	gaaaaatgcc	900
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<210> 730

<211> 654

<212> DNA

<213> Unknown (H38g579 nucleotide)

<220>

<223> Synthetic construct

<400> 730

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cacagcagag	tcctctccta	tgcaggctgc	ctgactcaga	tgctctctct	tgctattttt	120
ggaggcatgg	aagagaggca	tgctcctgag	tgtgatggcc	tatgactggg	ttgtagccat	180
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gtgacctgct	tcaaggatgt	ggaaattcct	aatttcttct	gtgaccttct	tcaactcccc	360
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tttggttttt	ttcccatctc	ggggaccctt	ttctcttact	ctaaaaattg	ttctccatt	480
ctgagggttt	catcgtcagg	tgggagggtat	aaagccctct	ccacctgtgg	gtctcacgtg	540
tcagttgttt	gctgagttta	tggaacaggc	gttggagggt	acctcagttc	ggatgtgtca	600
ttttccccc	gaaaggggtg	agtggcctca	gtgatgtacg	cggttgtcac	cccc	654

<210> 731

<211> 683

<212> DNA

<213> Unknown (H38g580 nucleotide)

<220>

<223> Synthetic construct

<400> 731

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cccaaagatg	attgtggaca	tccagtctca	cagcagagtc	acctcctatg	caggctgcct	120
gactcagatg	tctctctttg	ccatttttgg	aggcatggaa	gagagacatg	ctcctgagtg	180
tgatggccta	tgaccggttt	gtagccatct	gtcaccctct	atgtcattca	gccatcacga	240
acctcggttt	ctgtggcttt	ctagttttgt	tgtctttttt	ttttctcagt	cttttagacg	300
cccagctgca	caacttgatt	gccttacaaa	ggacctgctt	caaggatgtg	gaaattccta	360
atttcttctg	tgacccttct	caattccccc	gtcttgcacg	ttgtggcacc	ttcaccaata	420
acataatcat	gtatttccct	gcagccatat	ttggttttct	tcccatctcg	gggacctttt	480
tctcttacga	taaaattgtt	ttctccattc	tgagggtttc	atcatcagggt	gggaagcata	540
aggccttctc	caccaggggg	tctcacctgt	cagttgtttg	ctgattttat	ggaacaggca	600
ttggaggcta	cctcagttca	gatgtgtcat	cttccccgag	aaaggctgca	gtggcctcag	660
tgatgtacac	ggtggccatc	ccc				683

<210> 732

<211> 582

<212> DNA

<213> Unknown (H38g581 nucleotide)

<220>

<223> Synthetic construct

<400> 732

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gggatgctgg	tcaacctctg	ggagccaaag	aagaccatca	tcttactggg	ctgctctgtc	120
cagttcttca	tcttcctgtc	cctggggacc	actgagtga	tcctcctgac	ggtgatggcc	180
tttgaccgct	acatggctat	ctgccagccc	ctccactatg	ccaccatcgt	ccacctctg	240
ctgtgctggc	agctggcctc	tgtggcctgg	gtcatgagtc	tggtagagtc	agtgggtccag	300
acaccatcca	ccctccactt	gcctttctgc	cccgatcggc	aggtggatga	ttttgtctgt	360
gaggtccccag	ctctaattcg	actctcctgt	gaagacacct	cctacaatga	aatccagttg	420
gctgttgcca	gtgtcttcat	cttggctgtg	cctctcagcc	tcctccttgt	ctcttatgga	480
gccattgcct	gggcagtgtc	aaggactaac	tctgcaaaag	ggcagaggaa	agcttttggg	540
acctgctcct	cccatctcac	tgtggtcacc	ctcttctaca	gc		582

<210> 733

<211> 959

<212> DNA

<213> Unknown (H38g582 nucleotide)

<220>

<223> Synthetic construct

<400> 733

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catccaaagc	tggagaagac	attcttcctg	ctcatcctgc	tgatgtacct	ggtgatcccta	120
ctgggcaatg	gggtcctcat	cctggtgacc	atccttgact	cccgcctgga	cacacccatg	180
tacttcttcc	tggggaacct	ctccttctctg	gacatctgct	atacaacctc	ctcatccttg	240
acagcttctc	gacccccagg	aaaaccatct	ccttctcagc	ctgtgcagta	cagatgttcc	300
tctcccttgc	catgggagcc	acagagtgtg	ttctcctgag	catgatggcg	tttgatcgct	360
acgtggccat	ctgcaacccc	ctttggtacc	ctgaagtcac	gaacaaagct	acttatgtgc	420
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atgtgatctt	cctgggggtc	cctgttctgt	tcactctctt	ctcctatgtc	ttcatcattg	660
ccaccatcct	gaggatcccc	tcagctgagg	ggaggaaaaa	ggccttctcc	acctgctctg	720
cccacctcac	tgctgtgatc	gtcttctacg	ggaccatcct	cttcagtgtac	gggaagccca	780
agtctaagga	cccactggga	gcagacaaac	aggaccttgc	agacaaactc	atttcccttt	840
tctatggggg	ggtgaccccc	atgctcaacc	ccatcatcta	cagcctgagg	aacaagggaag	900
tgaaggctgc	tgtgaggaac	ctgggtatttc	agaaacgctt	cctgcagtga	tgggtggagg	959

<210> 734

<211> 954

<212> DNA

<213> Unknown (H38g583 nucleotide)

<220>

<223> Synthetic construct

<400> 734

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cacccaaagc	tggagaaaac	gttcttttgt	ctcatcctgc	tgatgtacct	ggtgatcccta	120
ctgggcaatg	gggtcctcat	cctgatgact	gtgtccaaact	cccacctgca	catgcccacg	180
tacttcttcc	tggggaacct	ctccttctctg	gacatctgct	atacaacata	ctcagtcccc	240
ctcatccttg	acagcttctt	gacccccagg	aaaaccatct	ccttctcagc	ctgtgcagtg	300
cagatgttcc	tctcctttgc	catgggagcc	acagagtgtg	ttctcctgag	catgatggcg	360
tttgatcgct	acgtggccat	ctgcaacccc	cttaggtacc	ctgtgggtcat	gagcaaggct	420
gcctacatgc	ccatggctgt	cggctcctgg	gtagctggaa	gcactgcttc	catgggtgcag	480

acatcccttg	caatgaggct	gcccttctgt	ggagacaaca	tcataaatca	cttcacctgt	540
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ggagtgaaca	atgtgatctt	cctgggggtc	ccggttctgt	tcattctctt	ctcctatgtc	660
ttcatcattg	ccaccatcct	gaggatcccc	tcagctgagg	ggaggaaaaa	ggccttctcc	720
acctgctctg	cccacctcac	agtcgtgggc	atcttctatg	ggaccatcct	cttcattgtat	780
gggaagccca	agtctaagga	cccgtggggg	gcagacaagc	aagactttgc	agacaaactc	840
atttcccttt	tctatggggg	ggtgaccccc	atgctcaacc	ccatcatcta	cagcctgagg	900
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<210> 735

<211> 962

<212> DNA

<213> Unknown (H38g584 nucleotide)

<220>

<223> Synthetic construct

<400> 735

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ctgggcaacg	gggtcctcat	cctgggtgacc	atccttgact	cccgcctgca	cacacccatg	180
tacttcttcc	tggggaacct	ctccttctctg	gacatctgct	atacaacctc	ctcatccttg	240
acagcttctt	gacccccagg	aaaaccatct	ccttctcagc	ctgtgcagta	cagatgttcc	300
tctcctttgc	catgggagcc	acagagtgtg	ttctcctgag	catgatggct	tttgatcact	360
acctggacat	gtgcaacccc	cttaggtacc	ctgtgggtcat	gagcaaggct	gcctacatgc	420
ccatggctgt	tggctcctgg	gcagctggta	tcaccaactc	tgtagtacag	atatccctag	480
caatgtgact	gcccttctgt	ggggacaatg	tcataaatca	cttcacctgt	gagatcctgg	540
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agtctaagga	cccaatggga	gcagacaaac	aggaccttgc	agacaaactc	atctccattt	840
tctatggagt	ggtgaccccc	attctcaacc	ccatcatcta	cagcccaggg	aacaaagatt	900
tgaaagctgc	tatgaggaac	ctggtggctc	aaaaacacct	aacagagtga	ctatcacaga	960
tc						962

<210> 736

<211> 375

<212> DNA

<213> Unknown (H38g585 nucleotide)

<220>

<223> Synthetic construct

<400> 736

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gaggtcctgg	ctgtcctgaa	gttggcctgt	gctgacatct	ctatcaacat	gatcaggcaa	120
aaggccttct	ccacctgtct	tgcccacctc	acagttgtgg	tcattcttcta	caggaccatc	180
ctcttcacgc	atgggaagcc	caagtcgaag	gacccactgg	gggcagacaa	gcaggatttt	240
gcagacaaac	tcattctcct	ctcctatgga	gtggtcaccc	ccatgctgaa	caccatcatc	300
tacagcctga	ggaaaaaggg	tgtgaaggct	gctgtgaaga	acctggtatt	tcagaaaccc	360
ctaactgaat	gacag					375

<210> 737

<211> 648

<212> DNA

<213> Unknown (H38g586 nucleotide)

<220>

<223> Synthetic construct

<400> 737

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cggcatcaca	ccatcaccta	tacgggttgc	ctcacgcaaa	tgtatttctt	tctgatgttt	120
ggtgatctag	acagcttctt	cctggctgcc	atggcgatg	accgctatgt	ggccatctgc	180
cacccctct	gctactccac	ggtcatgagg	ccccaagtct	gtgcccta	gcttgcatg	240
tgctgggtcc	tcaccaatat	cgttgccctg	actcacacgt	tcctcatggc	tcggttgctc	300
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tcatgttctg	acaccacat	caacgagatg	atgggttttg	tcttgggagg	caccgtactc	420
atcgteccct	ttttatgcat	tgteacctcc	tacatccaca	ttgtgccagc	tatcctgagg	480
gtccgaaccc	gtgggtgggt	gggcaaggcc	ttttccacct	gcagttccca	cctctgcgtt	540
gtttgtgtgt	tctatgggac	cctcttcagt	gcctacctgt	gtcctccctc	cattgectct	600
gaagagaagg	acattgcagc	agctgcaatg	tacaccatag	tgactccc		648

<210> 738

<211> 957

<212> DNA

<213> Unknown (H38g587 nucleotide)

<220>

<223> Synthetic construct

<400> 738

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cacccagagc	tggaaaagac	attcttcgtg	ctcatcctgc	tgatgtacct	cgtgatcctg	120
ctgggcaatg	gggtcctcat	cctggtgacc	atccttgact	cccgcctgca	cacgcccattg	180
tacttcttcc	tagggaacct	ctccttctctg	gacatctgct	tcactacctc	ctcagtccca	240
ctggtcctgg	acagcttttt	gactccccag	gaaaccatct	ccttctcagc	ctgtgctgtg	300
cagatggcac	tctccttttg	catggcagga	acagagtgtc	tgctcctgag	catgatggca	360
tttgatcgct	atgtggccat	ctgcaacccc	cttaggtact	ccgtgatcat	gagcaaggct	420
gcctacatgc	ccatggctgc	cagctcctgg	gctattgggtg	gtgctgcttc	cgtgggtacac	480
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gaggtgacga	atgtgatctt	cctaggagtc	ccggttctgt	tcattctctt	ctcctatgtc	660
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atcccccttt	tctatggggt	ggtgaccccg	atgctcaacc	ccatcatcta	tagcctgagg	900
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<210> 739

<211> 653

<212> DNA

<213> Unknown (H38g588 nucleotide)

<220>

<223> Synthetic construct

<400> 739

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cacagcagag	tcattctcta	tgcaggctgc	ctgactcaga	tgtctctctt	tgccattttt	120
ggaggcatgg	aagagagaca	tgctcctgag	tgtgatagcc	tatgagcggg	ttgtagccat	180
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aggacctgct	tcaaggatgt	ggaaattcct	aatttcttct	gtgaccttc	tcaactcccc	360
atcttgcata	ttgtggcacc	ttcaccaata	acataatcat	gtatttccct	gccgccatat	420
ttgggtttct	tcccatctcg	gggacctttt	tctcttacia	taaaattggt	ttctccattc	480
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cagttgtttg	ctgattttat	ggaacaggca	ttggaggcta	cctcggttca	gatgtgtcat	600
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<210> 740

<211> 648

<212> DNA

<213> Unknown (H38g589 nucleotide)

<220>

<223> Synthetic construct

<400> 740

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ggtaacatgg	acaatttcct	gctgggtgtg	atgtcctatg	accgatttgt	ggccatatgc	180
caccctttac	actacacaac	aaagatgacc	cgacagctct	gtgtcctgct	tgttgtgggg	240
tcatgggttg	tagccaacat	gaattgtctg	ttgcacatac	tgctcatggc	tcgactctcc	300
ttctgtgcag	acaacatgat	ccccacttc	ttctgtgatg	gaactcccct	cctgaaactc	360
tctgtctcag	acacacatct	caatgagctg	atgattctta	cagagggagc	tgtggtcatg	420
gtcaccccat	ttgtctgcat	cctcatctcc	tacatccaca	tcacctgtgc	tgctcctcaga	480
gtctcatccc	ccaggggagg	atggaaatcc	ttctccacct	gtggctccca	cctggctgtg	540
gtctgcctct	tctatggcac	cgtcategct	gtgtatttca	acccatcacc	ctctcactta	600
gctgggaggg	acatggcagc	tgcagtgatg	tatccagtgg	tgacccca		648

<210> 741

<211> 988

<212> DNA

<213> Unknown (H38g590 nucleotide)

<220>

<223> Synthetic construct

<400> 741

atggcagaag	aaaataagat	tctggtgact	cactttgtcc	tcacaggact	cacagatcat	60
ccagggctgc	aggcgcccct	gttcttggtg	ttcttggtga	tctacctcat	caccctgggtg	120
ggcaaccttg	gcctgatggc	tctcatctgg	aaggaccccc	accttcacac	ccccatatac	180
ttattttcttg	gcagtttagc	ctttgcagat	gcatgcactt	catcctctgt	aacttctaag	240
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gttttacttt	tttggttcca	atgcaaccac	agaatgcttc	ctgctggtag	tgatggccta	360
tgaccgctat	gtagccatat	gcaatcccct	gctttatcca	gtgggtgatg	ccaatagcct	420
ctgtactcag	tttataggta	tttcatattt	tattggtttt	ctgcattcag	cgattcatgt	480
gggtttgtta	tttagattaa	ctttctgcag	gtccaatatt	atacattatt	tctactgtga	540
aattttacag	ctgttcaaaa	tttcttgcac	caatcctaca	gttaatatatac	ttctgatttt	600
catcttttca	gcattttatac	aagtcttcac	ttttatgact	cttatcgtct	cttactccta	660
tattctctct	gccatcctga	aaaagaagtc	tgagaagggg	agaagcaaag	ccttctctac	720
ttgcagtgcc	catctgctct	ctgtctcttt	gttctacggc	accctcttct	tcatgtatgt	780
gagttctagg	tctggatcag	ctgcagatca	ggccaaaatg	tattctttat	tttacacaat	840
aataattcct	ttactaaatc	cttttattta	cagcctaagg	aacaaagagg	ttatagatgc	900
cctgagaaga	atcatgaaga	aataaatagt	tgtcagacaa	cattcaaacc	atttcttctt	960
tatattctgc	tgaagaaaac	cccaagtc				988

<210> 742

<211> 636

<212> DNA

<213> Unknown (H38g591 nucleotide)

<220>

<223> Synthetic construct

<400> 742

tgctactccc	agggtcacgg	ctagcagggc	taggttactt	agagggtagg	aggctaagtt	60
cctcgtacaa	tgcttgtgct	gctcagatgt	tcttttttgt	agccttggcc	acagtggaaa	120
atatcgctgt	tgacatcaat	ggcctatgac	cactatatag	cagtgtgcaa	acccttacac	180
tacactacca	ccacgatagc	cagtgtatgt	gctcatctgg	tcataggctc	ctatgtctgt	240
ggcttttctaa	atgcctccct	ccgcattgtg	gacatattca	gtctctcttt	ctgtaagttc	300

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aatcttgtcc atcacctttt ctgtgatgtt ccaccagtca tggctgtgtc ttgctctggt 360
aaacacatta gcaagaagat tctgggtttt atgtcaagct tcaatgtctt tttggctctt 420
ctagttatct tgacctccta cctgttcata ttcacacca tcttgaagat gcactcagct 480
cagggacact taaaagcttt gtccacctgt gcctctcacc tcattgcagt ctccatcttc 540
tatggaacta ctatctttat gtacttacag cctagctcca gccattccat ggacacagat 600
gaaatggcat ccttgttcta tgetgtgttc atctcc 636

```

<210> 743

<211> 942

<212> DNA

<213> Unknown (H38g592 nucleotide)

<220>

<223> Synthetic construct

<400> 743

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atgggggaca accaatcacg ggtcacagaa ttcactctgg ttggattcca gctcagtgtg 60
gagatggaag tgctcctctt ctggatcttc tccctgttat atctcttcag cctgctgggg 120
aatgggggtca tctttgggct catctgcctg gactctaagc ttcacacccc catgtacttc 180
ttcctctcac acctggccgt cattgacatg tcctatgctt ccaacaatgt tccaagatg 240
ctggcaaac tagtgaacca gaaaagaact atctcgttca tctcttgcat aatgcagact 300
tttttgtatt tggcttttgc tgttacagtg tgccctgatt ttggtgggtgat gtcctatgac 360
agatttggg ccatctgcca tcccctgcat tacactgtca tcatgagctg gagagtgtgc 420
actgtcctgg ctgtggcttc ctgggtgttc agcttcctcc tggctctggt ccatttagtt 480
ctcattctga ggctgccctt ctgtgggccc caggaggtga accacttctt cggtgaaatc 540
ctgtctgtcc tcaagtggc ctgtgctgac acctggctca accaggtggt catctttgca 600
gcctgcatgt tcatcctggg aggggtgact tgccctgggtc tggctctcta ctgacatc 660
ctggcgccca tcttgaggat ccagtctggg gagggccgca gaaaggcctt ctctacctgc 720
tctcccacc tctgcgtggt ggggcttttc tttggcagcg ccattgtcat gtacatggcc 780
cccaagtcaa gccattctca agaacggagg aagatccttt ccctgtttta cagccttttc 840
aaccgatcc tgaacccct catctacagc cttaggaatg cagaggtgaa aggggctcta 900
aagagagtcc tttggaaaca gagatcaatt gaagaatcat tt 942

```

<210> 744

<211> 648

<212> DNA

<213> Unknown (H38g593 nucleotide)

<220>

<223> Synthetic construct

<400> 744

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ttctctgacc tctgtctctc ttccgtgacc attcccaagt tgttacagaa catgcagaac 60
caggacccat ccattcccta tgcggactgc ctgacccaaa tgtacttctt cctgttattt 120
ggagacctgg agagcttctt ccttgtggcc atggcctatg accgctatgt ggccatctgc 180
ttccccctgc actacaccgc catcatgagc cccatgctct gtctcgccct ggtggcgctg 240
tcctgggtgc tgaccacctt ccattgccat ttacacactt tactcatggc caggttgtgt 300
ttttgtgcag acaatgtgat cccccacttt ttctgtgata tgtctgctct gctgaagctg 360
gccttctctg aactcagat taatgaatgg gtgatattta tcatgggagg gctcattctt 420
gtcatcccat tctactcat ccttgggtcc tatgcaagaa ttgtctctc catcctcaag 480
gtccccctt ctaagggtat ctgcaaggcc ttctctactt gtggctccca cctgtctgtg 540
gtgtcactgt tctatggaac cgttattggt ctctacttat gctcatcagc taatagtctt 600
actctaaagg aactgtcat ggctatgatg tacactgtgg tgaccccc 648

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<210> 745

<211> 936

<212> DNA

<213> Unknown (H38g594 nucleotide)

<220>

<223> Synthetic construct

<400> 745

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ggaaacatcc	tcattgtgtt	ttctgtgacc	actgaccctc	acttacactc	ccccatgtac	180
tttctactgg	ccagtctctc	cttcattgac	ttaggagcct	gctctgtcac	ttctcccaag	240
atgatttatg	acctgttcag	aaagcgcaaa	gtcatctcct	ttggaggctg	catcgctcaa	300
atcttcttca	tccacgtcgt	tgggtggtgtg	gagatggtgc	tgctcatagc	catggccttt	360
gacagatatg	tggccctatg	taagccccctc	cactatctga	ccattatgag	cccaagaatg	420
tgccctttcat	ttctggctgt	tgccctggacc	cttgggtgtca	gtcactccct	gttccaactg	480
gcatttcttg	ttaatttagc	cttctgtggc	cctaattgtgt	tggacagctt	ctactgtgac	540
cttctctggc	ttctcagact	agcctgtacc	gacacctaca	gattgcagtt	catggctact	600
gttaacagtg	ggtttatctg	tgtgggtact	ttcttcatac	ttctaatactc	ctacgtcttc	660
atcctgttta	ctgtttggaa	acattcctca	ggtgggttcat	ccaaggccct	ttccactctt	720
tcagctcaca	gcacagtggg	ccttttgttc	tttgggtccac	ccatgtttgt	gtatacacgg	780
ccacacccta	attcacagat	ggacaagttt	ctggctatatt	ttgatgcagt	tctcactcct	840
ttctgaatc	cagttgtcta	tacattcagg	aataaggaga	tgaaggcagc	aataaagaga	900
gtatgcaaac	agctagtgat	ttacaagagg	atctca			936

<210> 746

<211> 384

<212> DNA

<213> Unknown (H38g595 nucleotide)

<220>

<223> Synthetic construct

<400> 746

atgaactcag	agaacctcac	ccggggccgcg	gttgccccctg	ctgaattcgt	cctcctgggc	60
atcacaaatc	gctgggacct	gcgtgtggcc	ctcttctctga	cctgcctgcc	tgtctacctg	120
gtgagcctgc	tgggaaacat	gggcatggcg	ctgctgatcc	gcatggatgc	ccggctccac	180
acacctatgt	acttcttctc	ggccaacctc	tccctgctgg	atgectgcta	ttcctccgcc	240
atcgccccca	agatgctagt	ggacctgctg	ctgccccgag	ccaccatccc	ttacacagcc	300
tgtgccctcc	agatgtttgt	ctttgcagg	ctggctgata	ctgagtgttc	aatgcaatta	360
atgccaaaaag	tgaacaaaaa	tgta				384

<210> 747

<211> 810

<212> DNA

<213> Unknown (H38g596 nucleotide)

<220>

<223> Synthetic construct

<400> 747

atgaccattg	tcttgctttc	agctctggat	tcccggctgc	acacaccaat	gtatttcttt	60
ttggcaaac	tctcattcct	ggacatgtgt	ttcaccacag	gttccatccc	tcagatgctc	120
tacaaccttt	ggggctccaga	taagaccatc	agctatgtgg	gttgtgccat	ccagctgtac	180
tttgtcctgg	ccctgggagg	ggtggagtgt	gtcctcctgg	ctgtcatggc	atatgaccgc	240
tatgctgcag	tctgcaaac	cctgcactac	accatcatca	tgcacccacg	tctctgtgga	300
cagctggctt	cagtggcatg	gctgagtggc	tttggcaatt	ctctcataat	ggcaccaccg	360
acattgatgc	taccccgctg	tgggcacaga	cgagttgacc	actttctctg	tgagatgcca	420
gcactaattg	gtatggcctg	tgtagacacc	atgatgcttg	aggcactggc	ttttgccctg	480
gcaatcttta	tcactctggc	accactcatc	ctcattctca	tttcttatgg	ttacgttgga	540
ggaacagtgc	ttaggatcaa	gtcagctgct	gggcgaaaga	aagccttcaa	cacttgacgc	600
tcgcatctaa	ttgttgtctc	tctcttctat	ggtacaatca	tatacatgta	cctccagcca	660
gcaaatactt	attcccagga	ccagggcaag	tttcttacc	tttctacac	aattgtcact	720
cccagtgtta	acccctgat	ctatacacta	agaaacaaag	atgttaaaga	ggccatgaag	780
aaggtgctag	ggaaggggag	tgcagaaata				810

<210> 748

<211> 342
 <212> DNA
 <213> Unknown (H38g597 nucleotide)

<220>
 <223> Synthetic construct

<400> 748
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 atcccatatt gcaagtccag agccatcaat cattttttct gtgatgttcc agctatgttg 180
 acgctagcct gcacagacac ttgggtctat gagagcacag tgtttttgag cagcaccatc 240
 tttcttggtg ttcctttcac tgggtattgca tggtcctatg gccgggttct ccttgctgtc 300
 taccgcacgc actctgcaga agggaggaag aaggcctatt ca 342

<210> 749
 <211> 635
 <212> DNA
 <213> Unknown (H38g598 nucleotide)

<220>
 <223> Synthetic construct

<400> 749
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 ggttggtgctg acatttttgt tttgactgtc atggcctttg atcgctatgc tgctatctgc 180
 caacccctcc gttacactgt catcatgagt gctaagtctt atactgtgct ggcatcactg 240
 tcttggttgg gggccctggg tcattccttt gttcagaccc tcctgacctt ccagctgcc 300
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 gcctgtgctg atacaactct ggtaagtatg ttggtgggtg ccaacagtgg tctcatctcc 420
 ctgggggtgtt tctcattct tttggcctcc tacacagtca ttctgtttag tcttcaaaaa 480
 cagtctgcag agagctgaca caaagtctc tctacctgtg gatctcatct gactatagta 540
 actttcttct ttgttccgtg tacctttatt tatctccatc cactacttcc ccattggata 600
 aagctgtgtc tgtgttctat accaccatca cccca 635

<210> 750
 <211> 633
 <212> DNA
 <213> Unknown (H38g599 nucleotide)

<220>
 <223> Synthetic construct

<400> 750
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 gaagatagaa ctatctcctt cacaggatgc accatgcagt tattctttgt ctgcataatt 120
 gtagtaacag aaacatgcat gctggcagtg atggcctatg accgatatgt ggcggtgtgt 180
 accctcttct ctacacagtt gcaatgtacc agaggctttg ctccctgtta gtggctacat 240
 catactgctg ggggatagtc tgttccctga cacttaceta gtttctactg gagttatcct 300
 tcagaggaaa taatatcatt aataactttg tctgtgagca cgctgccatt gttgctgtgt 360
 cttgctctga cccctgtgtg agccagtaga tcactttagt ttctgccaca ttcaatgaaa 420
 taagcagcct gcttctatg ctttcatttt tatcactgtc atgaagacgg cttccactgg 480
 ggggagcaag aaagcgttct ccacgtctgc ctccactga cggccattac cattttccat 540
 gggactatcc ttttctctca ctgtgttctt aacgccaaaa gttcgtggct catggtcaag 600
 gtggcctctg gcttttacac agtgggtcatg ccc 633

<210> 751
 <211> 646
 <212> DNA
 <213> Unknown (H38g600 nucleotide)

<220>

<223> Synthetic construct

<400> 751

tttgtagaca	tctgtgttac	ctccaccaca	gtcccaaaga	cactgtcaaa	catccggaca	60
cagagtaaag	tcacacaccta	tgagggttg	atcaccacaga	tgtacttttt	tgtactcttt	120
atagtgttgg	acagcttact	cttgaccgtg	atggcctatg	accagtttgt	ggccatctgt	180
cacccctgc	actacacgg	catcgtgaac	cctcggtct	gtggactgct	ggttctggcg	240
tcctggatca	tgagtgcct	gaattccttg	atagaaagct	taatgggtgt	gccactgctc	300
ttttgtacag	acttgaat	ccccacttt	ttctgtgaac	ttaatcagat	aatcegcagt	360
gcctgttctg	acacctttct	taatgacatg	gtgatgtatt	tgtcagctgt	gcttctaggt	420
aggggatgtt	tcactgggat	cctgtactct	tactttaaga	cagtttctct	catacgtgca	480
atctcatcag	ctcaggggaa	gtacaaggca	ttttccacct	gtgcacgca	cctctcagtt	540
gtctccttat	tttattgtat	gggccttggg	gtgtacctta	gtgctgctgc	aaccacaaac	600
tcactctcaa	gtgcaacagc	ctctgatgta	cactgtggtc	accccc		646

<210> 752

<211> 342

<212> DNA

<213> Unknown (H38g601 nucleotide)

<220>

<223> Synthetic construct

<400> 752

atttgctttc	ctctccacta	tcccatccgt	atgagaaaaa	gagtgtgtgc	actgatgata	60
acaggatctt	ggatgatagg	ctccatcaac	tcttgtgctc	acacggtata	tgcactccgt	120
atcccatatt	gcaagtccag	agccatcaat	cattttttct	gtgatgttcc	agctatgttg	180
accctagcct	gcacggatag	ctgggtctat	gagtgcacgg	tgtttttgag	caccaccatt	240
ttctttgtgt	ttcccttcat	ttgtattgca	tgttcctatg	gccggattct	ccttgtgtgc	300
taccacatgc	actctgcaga	agggaggaag	aaggcctatt	cg		342

<210> 753

<211> 648

<212> DNA

<213> Unknown (H38g602 nucleotide)

<220>

<223> Synthetic construct

<400> 753

cttgtcgatg	tctcctatgc	cacaagtgtg	gtccctcage	tgtctggcaca	ttttcttgca	60
gaacataaag	ccatcccatt	ccagagctgt	gcagcccagt	tattttttct	cctggccttg	120
ggtagggattg	agtttgttct	cctggcggtg	atgggctatg	accgctatgt	ggctgtgtgt	180
gatgccttgc	gatactcggc	catcatgcat	ggagggtgtg	gtgctagggt	ggccatcaca	240
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gctcgtgtgg	acacctctc	caatgaggtc	accatcatgg	tgtctagcat	tggtcttctg	420
atgacacctt	tctgcctggt	tcttttgtcc	tacatccaga	tcactctccac	catcctaaag	480
atccagtcga	gagaaggaag	aaagaaagct	ttccacacgt	gtgcctctca	cctcacagtg	540
gttgccctgt	gctatggtgt	ggccattttc	acttacatcc	agccccactc	cagtcctctc	600
gtccttcagg	agaagtgtgt	ctctgtcttt	tatgccattt	taacacca		648

<210> 754

<211> 635

<212> DNA

<213> Unknown (H38g603 nucleotide)

<220>

<223> Synthetic construct

<400> 754

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gagaaaaaga	ctatttccta	ctggggctgt	ataactcaga	tgtttacctt	ccactttttt	120
ggttgtgctg	agatttttgt	cttgactgtc	atggcttttg	atcgctatgc	tgctatctgc	180
caacccctcc	gttacactgt	catcatgagt	gctaattgctt	atactgtgct	ggcatcactg	240
tcctggttgg	gggccctggg	tcatttcctt	gttcagaccg	tcctgacctt	ccagctgccc	300
ttctgtaatg	ctcaggttat	agaccattac	ttttgtgatg	tcacccagct	cctaaaactt	360
gcctgtgctg	atacaactct	ggtaaatatg	ttggtgggtg	ccaacagtgg	tctcatctcc	420
ctgggggtgtt	tcctcattct	tttggcctcc	tacacagtca	ttctgtttag	tcttcaaaaa	480
cagtctgcag	agagctgaca	caaagttctc	tctacctgtg	gatctcatct	gactatagta	540
actttcttct	ttgttccgtg	tatctttatt	tatctccatc	cactactttc	ccattggata	600
aagctgtgtc	tgtgttctat	accaccatca	cccca			635

<210> 755

<211> 342

<212> DNA

<213> Unknown (H38g604 nucleotide)

<220>

<223> Synthetic construct

<400> 755

atatgcaaac	ctttacttta	tccagccatt	atgaccaatg	gactgtgcat	ccggctatta	60
atcttgtcat	atgtaggtgg	tcttcttcat	gctttaatcc	atgaaggatt	tttattcaga	120
ctaaccttct	gtaactccaa	catagtacat	cacatttact	gtgacattat	cccattgtct	180
aagattttctt	gtactgattc	ttctattaat	tttctaattg	tttttatttt	ctcaggttca	240
attcaggtat	tcagcattgt	gactattctt	gtatcttata	catttgttct	cttcgcaatc	300
ttaaaaagga	aatctgataa	aggtgtaagg	aaagcctttt	cc		342

<210> 756

<211> 333

<212> DNA

<213> Unknown (H38g605 nucleotide)

<220>

<223> Synthetic construct

<400> 756

atattgtaacc	ctctgagata	ccccatcatc	atgagcaggc	acgtctgtgt	gcagatggcc	60
gccatctcct	gggtgacagg	ctgtctgact	gctctgctgg	taactagttg	tgccctgcag	120
atccccctct	gtgggaatgt	catcgaccat	ttcacatgtg	aaatccttgc	agtgctaaaa	180
ctagcttgtg	tgagttccct	gctcgtggac	atggttatgc	tggtggctcag	tattctcctg	240
ctgcccatcc	caatgctttt	gatttgcate	tcgtatggct	tcatectttc	tacaattctg	300
aggatcggct	caacagaggg	aagaaacaaa	gct			333

<210> 757

<211> 665

<212> DNA

<213> Unknown (H38g606 nucleotide)

<220>

<223> Synthetic construct

<400> 757

ttgcctgaca	tcggtttcac	ctccaccacg	gtccccaaga	tgattgtgga	catccagtct	60
cacagsagag	tcatctccta	tgcaggctgc	ctgactcaga	tgtctctctt	tgccatttkt	120
ggaggcatgg	aagagagaca	tgctcctgag	tgtgatggcc	tatggccggt	ttgtagccat	180
ctgtcaccct	ctatatcggt	cagccatctt	gaacccatgt	ttctgtggct	tcctagattt	240
gttgtcttcg	ttttgttttg	ttttgttttt	ctcagtcttt	tagactccca	gctgcacaa	300
ttgattgcct	tacaaatgac	cggcttcaag	gatgtggaat	tcctaatttc	ttctgggaac	360

cttctcaact	ccccatcttg	catgtttgtga	caccttcacc	aggaacatca	acctgtat	420
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gtttcctcca	ttctgagggt	ttcatcatca	ggtgggaagt	ataaaccttc	tccacctgtg	540
ggtctcacct	gccagttggt	tgtgtat	gtggaacagg	tgttgagg	tacctgggt	600
cagatgtgtc	atcttcccca	agaaagagt	cagtgcctc	agtgatgtac	ccggtgggtca	660
cctcc						665

<210> 758

<211> 646

<212> DNA

<213> Unknown (H38g607 nucleotide)

<220>

<223> Synthetic construct

<400> 758

tttgtagaca	tctgtgttac	ctccaccaca	gtcccaaaga	caactgtcaaa	catccggaca	60
cagagtaaa	tcataccta	tgcagattgc	atcaccaga	tgtacttttt	tgtactcttt	120
atagtgttg	acagcttact	cttgaccgtg	atggcctatg	accagtttgt	ggccatctgt	180
cacccctgc	actacacgg	catcgtgaac	cctcggtct	gtggactgct	ggttctggcg	240
tcctggatca	tgagtgcct	gaattccttg	atagaaagct	taatgggtgt	gccactgtct	300
ttttgtacag	acttgaaaat	ccccacttt	ttctgtgaac	ttaatcagat	aatccgcagt	360
gcctgttctg	acacctttct	taatgacatg	gtgatgtatt	tgtcagctgt	gcttctaggt	420
aggggatgtt	tcactgggat	cctgtactct	tactttaaga	cagtttctct	catacgtgca	480
atctcatcag	ctcaggggaa	gtacaaggca	ttttccacct	gtgcacgcga	cctctcagtt	540
gtctccttat	tttattgtat	gagccttggg	gtgtacctta	gtgctgtctg	aaccacaac	600
tcactctcaa	gtgcaacagc	ctctgatgta	caactgtggtc	acccc		646

<210> 759

<211> 834

<212> DNA

<213> Unknown (H38g608 nucleotide)

<220>

<223> Synthetic construct

<400> 759

atggcaatta	ggaaccattc	caccctccac	aaaccatgt	actttttttt	agctaatatg	60
tcctttctgg	agatttggtg	tgtcactgtc	actattccca	agatgcttgc	tggctttgtt	120
ggatccaaac	aggatcatgg	acagctaata	tcctttgagg	gatgcatgac	acagctttac	180
tttttccttg	gcttgggctg	cactgagtgt	gtccttctcg	ctgttatggc	caatgatcgc	240
tatatggcca	tctgctatct	tctccacaac	ccagtcattg	tcagtggccg	gctgtgtgtg	300
cagatggctg	ctggtctctg	ggctggaggt	tttggcatct	ccatgggtcaa	agtttttctt	360
atttcgggce	tctctaacgg	tggccccaac	atcatcaacc	actttttctg	tgatgtctct	420
ccattgctca	acctctcatg	cactgatatg	tccacagcag	agcttacaga	tttcatcctg	480
gccattttta	ttcttctagg	gccactctct	gtcactgggg	cctcctatgt	ggccattact	540
ggtgctgtga	tgcacattcc	ttcggtctgt	ggacgggtata	aggccttttc	cacctgtgcc	600
tctcatttca	atgttgtgat	aattttttat	gcagccagta	tcttcattta	tgctcggtcca	660
aaggcacttt	cagcttttga	caccaacaag	ttggtctctg	tactgtatgc	tgctcattgta	720
ccattgctca	atcccatcat	ttactgcctg	cgcaatcaag	aggtcaagag	agccctatgc	780
tgtattttgc	acctgtacca	gcaccaggat	cctgacccca	agaaaggtag	caga	834

<210> 760

<211> 942

<212> DNA

<213> Unknown (H38g609 nucleotide)

<220>

<223> Synthetic construct

<400> 760

atggaattta	cagatagaaa	ctacacgttg	gtcactgagt	ttattctatt	aggttttcca	60
actcgccctg	aactgcagat	tgtcctgttc	ctcatgtttc	tgacattgta	tgctataatt	120
ctgataggga	acattggatt	gatgctgttg	atcaggattg	atcctcacct	tcaaaccccc	180
atgtattttt	tccttagcaa	cctatcattt	gtagaccttt	gctattttct	agacattggt	240
cccaaaatgc	tgggtcaattt	cctctcggag	aacaaatcta	tttctatta	tgggtgtgcc	300
ctgcagtttt	attttttctg	tacttttgca	gatacagaat	ccttcaccc	ggccgccatg	360
gcctatgac	gctatgtcgc	catctgtaac	cctttattgt	acacagttgt	gatgtctagg	420
ggcatctgta	tgcggttgat	tgtcttgta	tacctggag	gcaacatgag	ttccctgggt	480
cacacatcct	ttgcctttat	tctgaaatat	tgtgacaaaa	atgttattaa	tcattttttc	540
tgtgacctcc	ctccccctgt	taaaactatc	tgcactgaca	caacaattaa	tgagtggctc	600
ctctccacat	acggcagctc	agtggaaatc	atgtgtttta	tcacatcat	catctectac	660
tttttcattc	ttctctcagt	cttaaagatc	cgctctttca	gtgggaggaa	gaagaccttt	720
tctacatgcy	cctctcacct	gacttcagtg	acgatctacc	aagggactct	cctctttatt	780
tactcacggc	ccagctacct	gtattctcca	aacactgata	aaattatctc	agtgttctac	840
accattttca	ttccagtgtc	gaatccgttg	atztatagtt	tgagaaataa	agatgtaaag	900
gatgcagctg	agaaagttct	aagatcaaa	gtagattctt	ca		942

<210> 761

<211> 948

<212> DNA

<213> Unknown (H38g610 nucleotide)

<220>

<223> Synthetic construct

<400> 761

atggataacc	aaagctccac	accgggcttc	ctccttctgg	gcttctctga	acaccaggg	60
ctgggaagga	ctctcttctg	ggatgtcatc	acttctacc	tcctaaccct	agtgggcaac	120
acactcatca	tcctgctgtc	tgcgctggac	accaagctcc	actctccaat	gtactttttc	180
ctctccaacc	tctccttctt	ggacctctgt	ttcaccacga	gttgtgttcc	ccaaatgctg	240
gccaacctct	ggggcccaaa	gaagaccatc	agcttctctg	actgctctgt	ccagatcttc	300
atcttctctg	ccctggggac	aactgagtg	atcctcatga	aagtgatggc	ttttgatcgc	360
tacgtggctg	tctgccagcc	cctccactat	gccaccatca	tccacccccg	cctgtgctgg	420
cagctggcat	ctgtggcctg	ggtcattggg	ctagtgggg	cagtgggtcca	gacaccatcc	480
accctgcacc	tgccttctg	ccccgatcgg	cagggtggatg	attttgtctg	tgagggtocca	540
gctctaattc	gactctctg	tgaagacacc	tcctacaatg	agatccagg	ggctgttgcc	600
agtgtcttca	tcttggttgg	gcctctcagc	ctcactcttg	tctcttacgg	agccattacc	660
tgggcagtg	tgaggattaa	ctccgccaca	gcatggagaa	aggcctttgg	gacctgctcc	720
tcccatctca	ctgtggtcac	cctcttctac	agctcagtea	ttgctgtcta	cctccagccc	780
aaaaatccgt	atgcccaagg	gaggggcaag	ttctttggtc	tcttctatgc	agtgggcaact	840
ccttcaacta	accctctcgt	atacaccctg	aggaacaagg	agataaagcg	agcactcagg	900
aggttactag	ggaaggaaag	agactccagg	gaaagctgga	gagctgct		948

<210> 762

<211> 927

<212> DNA

<213> Unknown (H38g611 nucleotide)

<220>

<223> Synthetic construct

<400> 762

atgaaaagag	agaactttac	tctcatcact	gactttgttt	tccaaggttt	ctctagcttc	60
catgagcagc	agatcaccct	ttttggcgtg	ttccttgac	tatacatctt	aaccttagca	120
ggcaatatca	tcattgtgac	catcatccga	attgatcttc	atcttcacac	acctatgtac	180
ttcttctctga	gcatgctgtc	cacttcagag	actgtatata	catttggtcat	tctcccaaga	240
atgctctcca	gcctcgtagg	tatgagccag	cccattgtcat	tggcagggtg	tgccacacag	300
atgttctttt	ttgtaacctt	tggcatcact	aactgcttcc	tgctcacagc	aatgggatat	360
gaccgctatg	tggccatctg	caacccccctg	agatacatgg	ttattatgaa	caagaggctg	420
cgtatccaac	ttgtcctggg	ggcctgcagc	attgggctga	ttgtagcaat	aacgcaagt	480
acatctgtat	tcaggttacc	cttctgtgct	agaaagggtg	cccacttctt	ctgtgacatc	540

cgccctgtga tgaagctctc ctgcattgac accactgtca atgaaatcct gactttgatt	600
atcagtgtgc tgggtgctgt tgtacctatg ggtctggttt tcattttctta tgttctcatt	660
atctctacaa tcctcaagat tgcttcagtt gagggccgga agaaggcttt tgccacctgt	720
gcattcccacc tcaactgtggt cattgtccac tacagctgtg cctccattgc ctacctcaag	780
cccaagtcag agaaccaccag agaacatgac cagctgatct cggtgacctt cactgtcatc	840
actcccctac tgaaccctgt ggtatacacc ctgagaaata aagagggtcaa agatgctctg	900
tgcagggctg ttggtgggaa gttttcc	927

<210> 763

<211> 650

<212> DNA

<213> Unknown (H38g612 nucleotide)

<220>

<223> Synthetic construct

<400> 763

tggtgtgaca tgggtttcac ctggtccacg gctcccaaga tgattgtgga catgcagtcg	60
cataggagag ccatctctca tgcgggctgt ctgacgcaga tgtctttctt gttcctttgt	120
gcatgtgtag aaggcatgct cctgactgtg atggcctatg actgctttgt agacatctgt	180
cgccctctgc actaccagat catcggaat cctcacttct gtgtcttctt cgtgggggtg	240
tcctttctcc ttagcctgtg ggattcccag ctgcacagtt ggattgtgtt acaatatcac	300
catcttcaag aatgtggaaa tctctaattt tgtctgtgac ccctctcaac ttctcaaact	360
tgctgtttct gacggcgta tcaatagcat attcatatat ttgatagta ctatgtttgg	420
tttcttccc atttcaggga tcctatggte ttactataaa atcgccccct ccattctaaag	480
gatttcatcg tcagatggga agtataaagc cttctccacc tgtggctcct caccaggcag	540
ttgtttgctg attttataga acaggcattg gcatgtacct gacttcagct gtgtcaccac	600
ccccaggaa tggtgtggtg gcatcattga tatacgtctt tgtcactccc	650

<210> 764

<211> 641

<212> DNA

<213> Unknown (H38g613 nucleotide)

<220>

<223> Synthetic construct

<400> 764

ttcactgacc tcttctttgt caccaacaca atccccaaga tgctggtgaa cctccagtc	60
cagaacaaag ccatctccta cacagggtgt ctgacacagc tctacttcct ggtctccttg	120
gtggccctgg acaacctcaa cctggccgtg atggcgtatg atcgctatgt ggccatctgc	180
cgtccccctcc actatgtcac agccatgate cctgggctct gtatcttctt cctctccttg	240
tgttggtgtg tctctgccc ctatggcctc atccatatcc tcctcatgac cagggtgacct	300
tctgtgggtc tcaaaagatc cactacctct tctgtgagat gtacttcctg ctaaggctgg	360
catgttccaa catccacgtc aaccacacag tactggtgc cacgggtgc ttcactctcc	420
tcattccccctt aggttctatg atcacatcca acgcccgcac tgtcagagcc atcctccaaa	480
taccctcagc cactgggaag tacaaagcct tctccacctg tgcctcccat ttggctgtgg	540
tctccctctt ctatgggact ctgggtatgg tgtacctgca gccccccaa acctactcca	600
tgaaggactc agtagccaca gtgatgcatg cggtggtgac g	641

<210> 765

<211> 635

<212> DNA

<213> Unknown (H38g614 nucleotide)

<220>

<223> Synthetic construct

<400> 765

tttgttgatt tctgttattc caccacaatt acacccaaac tgctggagaa cttggttgtg	60
gaagatagaa ctatctcctt cacaggatgc accatgcagt tattctttgt ctgcatattt	120

gtagtaacag	aaacattcat	gctggcagtg	atggcctatg	accgatatgt	ggcgggtgtg	180
aaccctcttc	tctacacagt	tgcaatgtac	cagaggcttt	gctccttggt	agtggctaca	240
tcatactgtt	gggggatagt	ctgttccctg	acacttacct	agtttctact	ggaattatcc	300
ttcagaggaa	ataatatcat	taataacttt	gtctgtgagc	acgctgccat	tgttgctgtg	360
tcttgctctg	accctgtgt	gagccaggag	atcacttttag	tttctgccac	attcagttaa	420
ataagcagcc	tgcttccat	gctttcattt	ttatcactgt	catgaagacg	ccttccactg	480
gggggcgcaa	gaaagcgttc	tccacgtctg	cctcccactt	gacggccatt	accattttcc	540
atgggactat	ccttttccct	tactgtgttc	ctaactccaa	aagttcgtgg	ctcatggtca	600
aggtggcctc	tgtcttttac	acagtgggtca	ttccc			635

<210> 766

<211> 635

<212> DNA

<213> Unknown (H38g615 nucleotide)

<220>

<223> Synthetic construct

<400> 766

ttagttgatt	tctgttattc	caccacaatt	acacccaagc	tgctgaggaa	cttggttgtg	60
gaagatagaa	ctatctcctt	cacaggatgc	accatgcagt	tattctttgt	ctgcatattt	120
gtagtaacag	aaacattcgt	gctggcagtg	atggcctatg	accgatatgt	ggcgggtgtg	180
aaccctcttc	tctacacagt	tgcaatgtac	cagaggcttt	gctccttggt	agtggctaca	240
tcatactgtt	gggggatagt	ctgttccctg	acacttacct	agtttctact	ggaattatcc	300
ttcagaggaa	ataatatcat	taataacttt	gtctgtgagc	acgctgccat	tgttgctgtg	360
tcttgctctg	accctgtgt	gagccaggag	atcacttttag	tttctgccac	attcaatgaa	420
ataagcagcc	tgcttccat	gctttcattt	ttatcactgt	catgaggacg	ccttccactg	480
gggggcgcaa	gaaagcgttc	tccacgtctg	cctcccactt	gacggccatt	accattttcc	540
atgggactat	ccttttccct	tactgtgttc	ctaactccaa	gagttcgtgg	ctcatggtca	600
aggtggcctc	tgtcttttac	acagtgggtca	ttccc			635

<210> 767

<211> 936

<212> DNA

<213> Unknown (H38g616 nucleotide)

<220>

<223> Synthetic construct

<400> 767

atgtccattt	ccaacatcac	agtctacatg	ccctctgtgt	tgacactagt	agggatccca	60
ggcctagaat	ctgtgcagtg	ctggattggg	attccattct	gtgccattta	tctcattgct	120
atgattggaa	attccttgct	tctgagcatc	atcaaactcg	agcgcagtct	ccatgagccc	180
ttgtacattt	tcttaggcat	gctaggagcc	acagacattg	cacttgctag	cagcattatg	240
ccaaagatgc	ttggaatatt	ctggtttaatt	gtgcctgaaa	tctattttga	ttcctgcttg	300
cttcaaattg	ggttcatcca	cacattgcag	ggtatagagt	caggcatcct	tgtggccatg	360
gccctggacc	gttatgtggc	catctgttat	ccactaagac	atgccaacat	cttcacccac	420
cagcttggtca	ttcagatagg	aactatggtc	gtactcaggg	ctgctattct	tgtagcccca	480
tgccctagtag	tgataaagtg	ccggtttcaa	ttttatcaca	caacagtcac	ctcccactcc	540
tactgtgagc	atatggccat	tgtgaaacta	gcagcagcaa	atgttcaagt	caacaaaaatc	600
tatggtttgt	ttgtggcctt	cactgtagca	ggatttgacc	tcacattcat	cacattgtcc	660
tacatccaga	tatttatcac	agtttttctg	ttgcccaga	aggaggctag	gtttaaagca	720
ttcaatacct	gcattgctca	catctgtgtc	ttcctccagt	tctacctcct	tgccctcttc	780
tccttcttca	cacatagggt	tgggtctcac	atccccctt	atatccatat	tctcttttct	840
agcatttact	tgtgtgtccc	tccatttctc	aatccacttg	tctatggtgc	aaagaccaca	900
cagattcgca	ttcatgtggt	aaaaatgttc	tgttca			936

<210> 768

<211> 954

<212> DNA

<213> Unknown (H38g617 nucleotide)

<220>

<223> Synthetic construct

<400> 768

atgtggcaga	agaatcagac	ctctctggca	gacttcatcc	ttgaggggct	cttcgatgac	60
tcccttacct	accttttccct	tttctccttg	accatgggtg	tcttccttat	tgcggtgagt	120
ggcaacaccc	tcaccattct	cctcatctgc	attgatcccc	agcttcatac	accaatgtat	180
ttcctgctca	gccagctctc	cctcatggat	ctgatgcatg	tctccacaat	catcctgaag	240
atggctacca	actacctatc	tggcaagaaa	tctatctcct	ttgtgggctg	tgcaacccag	300
cacttctctt	atttgtgtct	aggtggtgct	gaatgttttc	tcttagctgt	catgtectat	360
gaccgctatg	ttgccatctg	tcateccactg	cgctatgctg	tgctcatgaa	caagaagggtg	420
ggactgatga	tggctgtcat	gtcatgggtg	ggggcatccg	tgaactccct	aattcacatg	480
gcgatcttga	tgcacttccc	tttctgtggg	cctcggaag	tctaccactt	ctactgtgag	540
ttcccagctg	ttgtgaagtt	ggtatgtggc	gacatcactg	tgtatgagac	cacagtgtac	600
atcagcagca	ttctctctct	cctccccatc	ttcctgattt	ctacatccta	tgtcttcatc	660
cttcaaagtg	tcattcagat	gcgctcatct	gggagcaaga	gaaatgcctt	tgccacttgt	720
ggctcccacc	tcacggtggt	ttctctttgg	tttggtgctt	gcattcttctc	ctacatgaga	780
cccaggtccc	agtgcactct	attgcagaac	aaagttggtt	ctgtgttcta	cagcatcatt	840
acgcccacat	tgaattctct	gatttatact	ctccggaata	aagatgtagc	taaggctctg	900
agaagagtgc	tgaggagaga	tgttatcacc	cagtgcattc	aacgactgca	attg	954

<210> 769

<211> 881

<212> DNA

<213> Unknown (H38g618 nucleotide)

<220>

<223> Synthetic construct

<400> 769

gccacgtaca	attccagcaa	tactgtgggtg	acagagtttg	tgtttctgag	cttcccagag	60
ctgcaccatc	ttcaagggct	gctatttgggt	cactcctcat	catctatgtg	gtgaccatcc	120
tagaggacct	ggctgtcgtg	gggaccatca	gagccagcca	ccacctgcac	atatccacac	180
acctcttccct	ggcccaactc	tcggtgctgg	agactctgta	cacctcggtc	accgtcccaa	240
agctgttggc	cggactccca	gcacgagcga	cgaccatcta	tctccttctc	ggggcacctc	300
acctggctgc	tcctcttccct	ctcactcagc	tcctctgagt	gcgtcctccc	ggccaacatg	360
gactgtgact	ggcaccagct	catctggccac	ctgctgcaat	acccagccca	tcattggactc	420
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acttctgtga	tatcccaccc	ccgctagggc	tctcttgctc	cagcaccact	accatagaaa	600
tgcggaactca	ggcagcccag	gtgatccttg	cggcttccct	gcaggcaacc	acggtctcct	660
acacccacat	cctggccaga	tcgctgagga	ttccagaaag	gcccagcagc	ttaaaggcctt	720
ccccacctat	gcctcccacc	tgggtggcg	gctcctctaa	cctcatcaag	ctggtgttca	780
ggggtctact	tgggtgggat	ccctctgctc	aaacccatca	tctactgcct	gggaactgca	840
acatcaggga	ggccctggcc	aaactcctcc	aggcccttcc	c		881

<210> 770

<211> 880

<212> DNA

<213> Unknown (H38g619 nucleotide)

<220>

<223> Synthetic construct

<400> 770

gccacatata	attccagcaa	tactgtgggtg	acagagtttg	tctttctgag	cttcccagag	60
ctgcgccatc	ttcaagggct	gctatttgggt	cactcctcat	catctatgtg	gtgaccatcc	120
tagaggacct	ggctgtcgtg	gggaccatca	gagccagcca	ccacctgcac	atatccacac	180
acctcttccct	ggccaaactc	tcggtgctgg	agacctgta	cacctcggtc	accgtcccaa	240
agctgttggc	cggactccca	gcacgagcga	cgaccatcta	tctccttctc	ggggcacctc	300

acctggctgc	tcctcttctc	ctcactcagc	tcctctgagt	gcacccctcc	ggccaacatg	360
gactgtgact	ggcaccgggt	catctgccac	ctgtctgact	acccagccca	tcattggactc	420
catgcagctg	gctctgectg	cacctggcca	tcagcgccca	gctcagcagc	ttcccagcct	480
cctttgtgtc	cacggctctc	aactccagcc	tgaggctccg	cagccccgat	gtcctcaacc	540
actttctgtg	tatcccaccc	ccgctagggc	tctcttgctc	cagcaccact	accatagaaa	600
tgcggactca	ggcagccag	gtgatccttg	cggcttccct	gcaggcaacc	acggctctcct	660
acaccacat	cctggccaga	tcgctgagg	ttccagaaag	gccagcagc	taaaggcctt	720
ccccacctat	gcctcccacc	tgggggtggc	gctcctctaa	cctcatcaag	ctggtgtcag	780
gggtctactt	ggttgggata	cctctgtctc	aacctatcat	ctactgcctg	ggaactgcaa	840
catcagggag	gccctggcca	aactcctcca	ggcccttccc			880

<210> 771

<211> 524

<212> DNA

<213> Unknown (H38g620 nucleotide)

<220>

<223> Synthetic construct

<400> 771

ctcctaattg	cagcagacaa	ccacacagcg	tagaggcggt	tgtcctgcag	ggttttctctg	60
aagaccttcc	actccagggc	tgctgctttg	cttttttcc	cctttacctg	atggcacttg	120
taggaaacat	cctcatggtc	atggccatca	gtctgaatcc	aggcctccac	acgccagtgt	180
acttctttct	caccaacctg	gcccttttag	acatcgtctg	cacatccatg	gacaaagca	240
gagtgggtgg	tgtgctgtac	acagtgggtc	gccccaccct	gaacccctca	cctactccct	300
gcggaacaag	gacttatcag	tagcactgag	gagagtgttt	tcttgcatca	ggtaaaagga	360
aggggaagttt	ctagtgtgaa	atgttccagg	tgtaaacaaa	ctaatttcaa	catatgactt	420
tgagaatctc	atgcaagcag	caaggaacaa	gaaagtaatt	aatgccacat	atttataaat	480
aatgtgtctc	cgcacggggc	tgccatcatt	caatgtggaa	ctcc		524

<210> 772

<211> 951

<212> DNA

<213> Unknown (H38g621 nucleotide)

<220>

<223> Synthetic construct

<400> 772

atggaaagga	ccaacgattc	cacgtcgaca	gaatttttcc	tggtagggct	ttctgcccac	60
ccaaagctcc	agacagtttt	cttcgttcta	atttttgtgga	tgtacctgat	gatcctgctt	120
ggaaatggag	tccttatctc	agttatcatc	tttgattctc	acctgcacac	ccccatgtat	180
ttcttctctc	gtaatctttc	cttctctgac	gtttgctaca	caagttcttc	tgtcccacta	240
attcttgcca	gctttctggc	agtaaagaaa	aaggtttcc	tctctgggtg	tatgggtgcaa	300
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gaccgctatg	tggccatctg	ctacccactg	agataccctg	tcatcatgag	caagggtgcc	420
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gcttttgcaa	tgcagttacc	attctgtgct	aataatgtca	ttaaaccatt	tgtctgtgaa	540
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tcccttttct	atggagtgat	gactcccatg	cttaatcctc	tcatctatag	tctgcgaaac	900
aaggatgtaa	aggctgctgt	caaaaacata	ctgtgttagga	aaaacttttc	t	951

<210> 773

<211> 954

<212> DNA

<213> Unknown (H38g622 nucleotide)

<220>

<223> Synthetic construct

<400> 773

atggaatggg	aaaaccaa	cattctggtg	gaattttttc	tgaagggaca	ttctgttcac	60
ccaaggcttg	agttactctt	ttttgtgcta	atcttcataa	tgtatgtggt	catccttctg	120
gggaatggta	ctctcatttt	aatcagcatc	ttggaccctc	accttcacac	ccctatgtac	180
ttctttctgg	ggaacctctc	cttcttggac	atctgtctaca	ccaccacctc	tattccctcc	240
acactagtga	gcttcctttc	agaaagaaag	accatttcct	ttcttggtcg	tgcagtgcag	300
atgttccttg	gcttgcccat	ggggacaaca	gagtgtgtgc	ttctgggcat	gatggccttt	360
gaccgctaag	tggctatctg	caacctctg	agatatccca	tcacatgag	caagaatgcc	420
tatgtaccca	tggctgttgg	gtcctgggtt	gcagggttgc	tcaactctgc	agtacaaact	480
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gtggccacaa	tattgttcac	attgatgcc	ctgctcttga	tagttatctc	ttactcatta	660
atcatttcca	gcacctcaa	gattcactcc	tctgagggga	gaagcaaagc	tttctctacc	720
tgctcagccc	atctgactgt	ggtcataata	ttctatggga	ccatcctctt	catgtatatg	780
aagcccaagt	ctaaagagac	acttaattca	gatgacttgg	atgctaccga	caaaattata	840
tccatgttct	atgggggtgat	gactcccatg	atgaatcctt	taatctacag	tcttagaaac	900
aaggatgtga	aagaggcagt	aaaacaccta	ccgaacagaa	ggttcttttag	caag	954

<210> 774

<211> 369

<212> DNA

<213> Unknown (H38g623 nucleotide)

<220>

<223> Synthetic construct

<400> 774

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tggccttccc	tgcagcgggt	cctctctgcc	cttgtcctcc	tgtgctacct	cctgaccttg	120
acgggcaact	cggcgtgtgt	gctgctggcg	ggcgaccg	cgctgcaca	cgcccatgta	180
ctacttcttc	tccacctggc	cttggttagac	gcgggcttca	ctactagcgt	ggtgcccgcg	240
ctgctggcca	acctggcgga	ccagcgtctc	cgtgcgcgca	gccactgcac	ggcccagctg	300
tgcgcacgcg	tggctctggg	ttccgcgcaa	tgcgtccatc	tggcgggtgat	ggctctgggc	360
cgcgcggtc						369

<210> 775

<211> 945

<212> DNA

<213> Unknown (H38g624 nucleotide)

<220>

<223> Synthetic construct

<400> 775

atgagacaga	ataacaatat	tacagaattt	gtcctcctgg	gctttttctca	ggatcctggt	60
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ctgctcattg	tgggtggatat	tattgccagc	ccttccttgg	gttccccaat	gtatttcttc	180
cttgccctgcc	tgtcatttat	agatgctgca	tattccacta	ccatttctcc	caagttaatt	240
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atagaccatt	tctttgggtg	ggctgaggtc	ttccttctgg	tggatgatggc	ctgtgatcgc	360
tatgtggcca	tctgtaagcc	actgcactat	ttgaccatca	tgaatcgaca	ggtttgcttc	420
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tcccttaaaa	cttacagtca	ggaaaagagg	ggtaaagcct	tgtctacctg	cagctccggc	720
agtaccgttg	ttgtcctctt	ttttgtaccc	tgtattttca	tatatgttag	acctgtttca	780
aactttccta	ctgataagtt	catgactgtg	ttttatacca	ttatcacaca	catgctgagt	840

cctttaatat atacgttgag aaattcagag atgagaaatg ctatagaaaa actctttgggt 900
 aaaaagttaa ctatatattat tataggagga gtgtccgtcc tcatg 945

<210> 776
 <211> 352
 <212> DNA
 <213> Unknown (H38g625 nucleotide)

<220>
 <223> Synthetic construct

<400> 776
 cgctgtgcgc cccgcctgct ggaccacttc atctgtgagc tgccggcggt gctcaagctg 60
 gcctgcggag gcgacggaga cactaccgag aaccagatgt tcgccgcccg cgtggtcatc 120
 ctgctgctgc cgtttgccgt cactcctggc tcctacgggt ccgtggcccg agactgtctg 180
 ttgcatgcgg ttcagcggag gccggcagag aggcggtggg cacgtgtggg tcccacctga 240
 cagccgtctg cctgtttctac ggctcggcca tctacaccta cctgcagccc gcgcagcata 300
 caaccaggca cggggcaagt tcgtatcgct cttctacacc gtggtcacac ct 352

<210> 777
 <211> 937
 <212> DNA
 <213> Unknown (H38g626 nucleotide)

<220>
 <223> Synthetic construct

<400> 777
 ggactgagta ataatgttac agaatttgtc ctcttgggca acactcagtg tcctgatgtg 60
 caaaatgcat tatttgcacat ggttttactc acatacgttg tgagtatggc gggaaacttg 120
 cttgctgtgg tggctattat ttccagccct tcctttggct ccccaatgta cttcttcctc 180
 acagcctgtt atttatatat gctgcatatt ccaataccat ttctcccaa ttgattatag 240
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 accacttatt tgggtggtgct gaggtcttcc tacttgtggg gatgtcctac gatttctatg 360
 tggccatctc taagccactg cactatttga ccatcatgaa tcaacagggt tgtatccttc 420
 tgttgggtgg ggctgtgact ggaggttttg tgagttgtgt gtttcaaatt gttgttgtgt 480
 acactctctc gttctgtggc caaatgtcac tgaccacttt gtctgtgaca tgtaccatt 540
 attggaactg gtttgcactg atacctactt tataggcttc actggtgttg ccaatggtct 600
 agcaatctgt atggtcgtct tcacccttct actaatctcc tatggagtca tcctaaacaa 660
 ctttaaaact tatagtcagg aaggagggt taaagccctg tctgcctgca tctctacat 720
 aacagtcact gtccgttttc ttgttccctg tattttcctt ttcggttagac ctgtttcgaa 780
 ctttcttatt gataaattca tgactgtgtt ttatacagtt atcatacaca tgttgaatcc 840
 attaataac acactgagaa atttagagat gagaattgct gtaaaatcca atgtaaaaaa 900
 actctggcat taaaaactta actatagtta gaatgag 937

<210> 778
 <211> 970
 <212> DNA
 <213> Unknown (H38g627 nucleotide)

<220>
 <223> Synthetic construct

<400> 778
 atgagactga gtagcgatgt tacagcattt gtcctcctag gccttactca ggatcctgat 60
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 ctgcccattg tgggtgactat tattgccacc cccaccttag gctccccagt gtacttcttc 180
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 gtaagctatc tccatgataa aaagactatt tccttcggag cttgcatggg tcagcccttt 300
 tatagaccac ttagttgggtg gtgctgaggc cttcattctg ttgggtgatgg cctataatcg 360
 ctatgtagcc atctgtaagc cactgcacta tttcaccatc atgaattgac aggtttgcat 420

ccttctgttg	gtgggtggctg	tcaactgctgg	ttttgtgcat	tctgtgtttc	aaatttttagt	480
tgcgtacagt	ctccttttct	gtgggtcccaa	tatcattgac	cactttttct	gtgacatgta	540
cccattattg	gaactggcac	acactgacac	ctactttata	ggcctcactg	ttgttgccaa	600
tggtggagga	atctgtatgg	tcttggtcat	ccttctacta	atctcctgtg	gggtcatcct	660
aatctccctt	aaaacttata	gtcaggaagg	gaggcataaa	gccctgtcta	cctgcagctc	720
ccacattacc	gtgggtgtcc	tgttttttgt	tccctgtatt	ttcctgtatg	ttagacctgt	780
ttcaaacttt	cctattaata	aattcattac	tgtgttttat	acagttatca	cacccatggt	840
gaatccatta	atatacacat	tgagaaactg	agagatgaaa	aatgctatag	gaaacctctg	900
gtgtaaata	taactctaga	tagaataaga	gggtacattt	tcatgtaggt	acagggtaat	960
gcaggtaaag						970

<210> 779

<211> 704

<212> DNA

<213> Unknown (H38g628 nucleotide)

<220>

<223> Synthetic construct

<400> 779

cccattgtact	tggtcctcgg	caatttgtcc	ttcattgac	tctgttatcc	atttgtcttt	60
acccccaaaa	tgctgatgag	ctttatttca	gagaggaaca	tcatctcctt	tccaggatgc	120
ataactcagc	tcttttttct	ctgctttttt	gtccactctg	agtgtctatg	gctgacagcc	180
atggcctatg	atcgctatgt	ggccatctgc	aaaccccttc	tgtacatggg	caccacgtcc	240
ctcagatctg	ttctctactg	atgcttggtt	catatgtgat	ggggtttgct	ggggccatgg	300
tccacacaga	gtgtatgatg	aagctcatct	tttgtgactc	caacgtcatc	aaccataaca	360
tgtgtgacat	cttcccactg	ctccagctct	cctgcagcag	cacctaggcc	aatgagctgg	420
tgatgtctgt	tattgtaggc	acagttgtta	tagtatcaag	cctcattatc	ttaatctctt	480
atgctttgat	tcttttcaat	atccttcaca	tgtcctcagc	cgaggggttg	ttcaaagcca	540
tcggtagctg	tggtcctccac	ataataactg	ttggcctatt	ctatgaattt	gggctgatca	600
ctcatgttaa	gttatcatct	gattgggtata	tgggtcaggg	gaagtttctc	tcagtgtttt	660
atacaaagt	ggttcccatg	ctgaaccctt	tcatctactg	tctg		704

<210> 780

<211> 924

<212> DNA

<213> Unknown (H38g629 nucleotide)

<220>

<223> Synthetic construct

<400> 780

atgaggcaga	ataacaatat	tacagaattt	gtcctcctgg	gcttctctca	gtatcctgat	60
gtgcaaaaatg	cattattttgt	catgttttta	ctcatatata	ttgtgactat	gggtgggaac	120
ctgctcattg	tggtgtctat	tattgccagt	cccttttttg	gctccccagt	gtacttcttc	180
cttgccctgcc	tgtcatttat	agatgctgtg	tattccacca	ccatttctcc	tgtattgatt	240
gtagacttac	tctgtgataa	aaagactatt	tccttcccag	cttgcatggg	tcagctattt	300
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tacgtggcca	cctgtaagcc	actgcgctat	ttgaccatca	tgaattgaca	ggtttgcac	420
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gtgtacagtc	tcccttttctg	tggccccaat	gtcattttatc	actttttctg	taacatatac	540
cctttatttg	acctggaatg	cactgacacc	tacttctgtg	gcctcgctgt	ggttttcaat	600
gggtggagcaa	tctgtatggt	catcttcacc	cttctactaa	tctcctatgg	ggtcaccta	660
aactccctta	aaacttatag	tccggaaggg	aggcataaag	ctccgtttat	ctgcagctcc	720
cactttatca	tggttatctt	gtttttttgt	ccctgtattt	tcttatatgt	tagaccggtt	780
tcaaactttc	ctattgataa	attcctgact	gtgtttttatt	cagttatcac	acccaagttg	840
aatcctttta	tatacatggt	gagaaattca	gagatgagaa	atgctataga	aaatctcttg	900
ggataccaaa	gtgggaagac	agga				924

<210> 781

<211> 690

<212> DNA

<213> Unknown (H38g630 nucleotide)

<220>

<223> Synthetic construct

<400> 781

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cccatgtact tgttctctgc caacttgtcc ttgcctgaca tcgggtttcac ctccagcatg      60
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ctgactccca tgtctctctt tgccattttt ggaggcatgg aagagagaca tgctcctgag      180
tgtgatccct atgaccggtt tgtagccatc tgtcaccctc tatatcattc agccatcatg      240
aaccctgtgt tctgtggctt tctagttttg ttgtcttttt tttctcagtc tcttttagac      300
gcccagggtgc acaacttgat tgccttacia atgacctgct tcaaggatgt ggaaattcct      360
aatttcttct gggaaccttc tcaactcccc catcttgcac gttgcgacac cttaccaat      420
aacataatca tgtattcccc tgctgccata tttgggtttt ttcccatctc ggggacctt      480
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aaggcctgct ccacctgtgg gtctcacctg tcagttgttt gctgatttta tggaacaggc      600
ttttgggggt acctcagttc agatgtgtca tcttccccgg gaaaggctgc agtggcctca      660
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<210> 782

<211> 681

<212> DNA

<213> Unknown (H38g632 nucleotide)

<220>

<223> Synthetic construct

<400> 782

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tctttcctgg agattggctt caacctagtc attgtgcccc aatgctggg gacctgctt      60
gcccaggaca caaccatctc cttccttggc tgtgccactc agatgtattt cttcttcttc      120
tttggggtag ctgaatgctt cctcctggct accatggcat atgaccgcta tgtggccatc      180
tgcagtcctt tgcactacct agtcatcatg aaccaaagga caggggccaa actggctgct      240
gcttctctgg tcccaggctt tctgtagct actgtgcaga ccacatggct cttcagtttt      300
ccattctgtg gcaccaacaa ggtgaaccac ttcttctgtg acagcccgcc tgtgctgaag      360
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gttgtctctc tttctatat atcattaagc ctcacgtact tccggcctaa atcaaataat      600
tcacctgagg gcaagaagct gctatcattg tcgtacactg ttatgactcc catgctgaac      660
ccctttcctc tactgtctcg g      681

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<210> 783

<211> 576

<212> DNA

<213> Unknown (H38g633 nucleotide)

<220>

<223> Synthetic construct

<400> 783

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atggtcacag agttcctcct actgggattt ctctggggcc caaggattca gatgctcctc      60
tttgggctct tctccctgtt ctatgtcttc accctgctgg ggaatgggac catcctgggg      120
ctcatctcac tggactccag actccacacc cccatgtact tcttctctc acacctggcg      180
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ccagccaagc ccatctcctt tgccgggccc atgatgcaga cttttctgtt ttccactttt      300
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caccctctcc gatatttcat catcatgacc tggaaagtct gcacactct ggccatcact      420
tcttggacat gtggctcctt cctggctatg gtccatgtga gctcatcct aagactgcc      480
ttttgtgggc ctctgaaaat caaccactty ytctgtgaaa tctkktctg cctcaggctg      540
ggctgtgctg atacctggct caaccagggt gtcac      576

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<210> 784
 <211> 924
 <212> DNA
 <213> Unknown (H38g634 nucleotide)

<220>
 <223> Synthetic construct

<400> 784
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 tacttcttcc tctccaacct gtcttgccct gacatcggtt tcacctccac cacgggtcccc 240
 aagatgattg tggacatcca gtctcacagc agagtcattc cctatgcagg ctgcctgact 300
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 tgtttctgtg cctttctagt tttgttgtct ttttttttct cagtctttta gactcccagc 480
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 ggtacctcag ttcagatgtg tcattctccc ccagaaaggg tgcagtggcc tgcagtgatg 840
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 aaaagtgtct tgcggcggcc gcaa 924

<210> 785
 <211> 714
 <212> DNA
 <213> Unknown (H38g635 nucleotide)

<220>
 <223> Synthetic construct

<400> 785
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 cccaagatga ttgtggacat ccagttctac agcagagtga tctcctatgc aggcgcctg 120
 actcagatgt ctctctttgc catttttggg ggcattggaag acaacatgct cctgagtgtg 180
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 aatttcttct gtgaccttc tcaactcccc catcttgcct gttgtgacac cttcaccaat 420
 aacatcatcg tgtatttccc tgctgtcata tttgttttcc ttcccatctc ggggaccctt 480
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 aaaaccttct ccacctgtgg gtctcacctg tcagttattt gcttatttta tggacaggt 600
 gttggagggt acctcagttc agatgtgtca tcttccctga gaaaggctgc agtggcctca 660
 gtgatgtaca agatggtcac ccccatgctg aacctcttca tttacacctt gcgg 714

<210> 786
 <211> 962
 <212> DNA
 <213> Unknown (H38g636 nucleotide)

<220>
 <223> Synthetic construct

<400> 786
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 gggaaatggc atcattcttc acatcatccg aattgactct tccttgacc aacctatgta 180

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gatgttttct	atgcactctt	tcactcttat	ggagtcaggt	gtccttctgg	caatgtcagt	360
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tgcaccgctt	tggacggcat	ttacctccac	ttttccagac	tgtcacggcc	aatgcttacc	840
tcttctttcc	tctgtgggtc	aaccccattg	tctatagtat	caaaatcaaa	gaaattcgca	900
acagcgttgt	tcttacacta	tccaggaaga	ggggtgagtt	ctaattggaga	ccgaagatac	960
cc						962

<210> 787

<211> 872

<212> DNA

<213> Unknown (H38g637 nucleotide)

<220>

<223> Synthetic construct

<400> 787

acctcagagg	atccagaacg	gcagctggtc	cttgettgac	tgttccctgtc	catgtgcctg	60
gtcatgggtgc	tggggaacct	gctcatcatc	cggccatgag	ccctgactcc	cacctccaca	120
cctccatgta	cttcttccct	tccaacctgt	ccttgccctga	catcggtttc	acctccacca	180
cgggtccccc	gatgactgtg	gacatccagt	ctcgcagcag	agtcactctcc	tatgcaggct	240
gctgactca	gaagtctctc	tttgccattt	ttggaggcac	ggaagagaga	catgtctcctg	300
agtgtgatgg	cctatgaccg	gtttgtagcc	atctgtcacc	ctctatatca	ttcagccatc	360
atgaacctgt	gtttctgtgg	cttccctagt	ttgctgtctt	ttttttttct	cagtctttta	420
gactcccagc	tgtacaactt	gattgcctta	ctaataacct	gcttcaagga	gggtggacatt	480
cctaatttct	tctgtgacct	ttctcaactc	ccccatcttg	ccgttgtgac	accttcatca	540
ataacataat	catgtatttc	cctactgcca	tatttggttt	tcttcccate	tcggggaccc	600
ttttctctta	ctataaaatt	gtttccctcca	ttctgagggt	ttcatcatca	gggtgggaagt	660
ataaagcctt	ctccacctgt	gggtctcacc	tgtcagttgt	ttgctgattt	tatggaagag	720
gtgttggagg	gtacctcagt	tcagatgtgt	catcttcccc	cagaaagggt	gcagtggctg	780
cagtgatgta	cacgggtggc	acctccatgc	tcaaccctt	tatctacagc	ctgggaaaca	840
gggatattaa	aagtgtcttg	cggcgggccgc	aa			872

<210> 788

<211> 646

<212> DNA

<213> Unknown (H38g638 nucleotide)

<220>

<223> Synthetic construct

<400> 788

ctagtggact	tttgttactc	ttcagctgtc	actcccacag	tcatagtctgg	gctcgttata	60
ggagacaagg	tcattctctta	caatgcattg	gctgctcaaa	tgttcttttt	tgcagccttt	120
gccactgtgg	aaaatttccct	cttggcctca	atggcctatg	accgctatga	tgcagtgtgc	180
aaacccctac	attacaccac	caccatgaca	acaagtgtgt	gtgcatgtct	ggctataatc	240
tgttatgtct	gtgggtttctt	gaatgcctcc	atacacattg	gggaaacatt	gtctctcttt	300
ctgtatgtcc	aatgaagtcc	attgcttttt	ctgtgatgtt	ccaccagtca	tggctctgtc	360
ttgctgtgat	agacatgtga	atgagctagt	tctcatttat	gtagccagtt	tcaatatctt	420
ttctgccatc	ctagtctatc	tgatctccta	cctattcata	tttatcacca	tcctaaagat	480
gcactcagct	tcaggatacc	agaaggcttt	gtccacctgt	gcctcccacc	tcactgcagt	540
catcatcttc	tatgggacta	ttatcttcat	gtacttacag	cccagctctg	gtcactccat	600
ggacacagac	aaactggcat	ctgtgttcta	tactatgatc	atcccc		646

<210> 789
 <211> 648
 <212> DNA
 <213> Unknown (H38g639 nucleotide)

<220>
 <223> Synthetic construct

<400> 789
 tttgtggaca tctgtctctc ctgcaccacc gtccccaaga tgctggccaa tcacatactc 60
 gagactcaga ccatctcctt ctgtggctgt ctcacacaga tgtatttcgt ttcatgttc 120
 gtggacacgg acaatttcct cctagctgtg atggcctatg accactttgt cgccgtgtgc 180
 cacccttac attacacagc aaagatgacc catcagctct gtgccctgct gggtgtgtga 240
 ttatgggtgg ttgccaacct gaatgtcctt ctgcacaccc tgctgatggc tccactctca 300
 ttctgtgcag acaatgccat cactcacttc ttctgcatg tgactccct actgaaactc 360
 tcctgtcag acacacacct caatgaggtc ataatcctta gtgaggggtgc cctgggtcatg 420
 atcaccccat ttctttgcaa cctggcgtct tatatgcaca tcacctgcac tggcctgaag 480
 ggcccatcca caaaggggaag gtggaaagcc ttctccacct gtggctctca cctggctgtg 540
 ggtctcctct tctacagcac catcactgct gtgtatttta accctctgtc ctccactca 600
 gctgcgaaag acactatggc tactgtgttg tatacagtag tgactccc 648

<210> 790
 <211> 471
 <212> DNA
 <213> Unknown (H38g640 nucleotide)

<220>
 <223> Synthetic construct

<400> 790
 atctgcagcc ccttgtctgta caatgtcctc atgtcctatc accactgctt ctggctcaca 60
 gtgggagttt acatttttagg catccttggg tctacaattc acaccggctt tatgttgaga 120
 ctctttttgt gcaagactaa tgtgattaac cattattttt gtgatctctt ccctctcttg 180
 gggctctect gctccagcac ctacatcaat gaattactgg ttctgggtctt gagtgcattt 240
 aacatcctga cgctgcctt aaccatcctt gcttcttaca tctttatcat tgccagcatc 300
 ctccgcattc gctccactga gggcaggtcc aaagccttca gcaactgcag ctcccacatc 360
 ttggctgttg ctgggttctt tgggtctgca gcattcatgt acctgcagcc atcatctgtc 420
 agtccatgg accaggggaa agtgcctct gtgttttata ctattgttgt g 471

<210> 791
 <211> 975
 <212> DNA
 <213> Unknown (H38g641 nucleotide)

<220>
 <223> Synthetic construct

<400> 791
 atgaagactt tgtgttcctt tcttcagatc agcagaaata tgcacaaaga aaaccaaacc 60
 accatcactg aattcattct cctgggactc tccaaccagg ctgaacatca aaacctctc 120
 tttgtgcttt tcttgagtat gtatgtgggtc actgtgggtg ggaacgggct catcattgtg 180
 gctatcagct tggatatata ccttcacacc cccatgtatc tcttcttgc ctacctatcc 240
 tttgtctgata tttcctccat ttccaactca gtccccaata tgctgggtgaa tattcaaacc 300
 aacagccaat ccatctctta tgagagctgc atcacacaga tgtacttttc tattgtgttt 360
 gtcgtcactg acaatttgct tttggggacc atggccttcg accactttgt ggcgatctgc 420
 caccctctga actatacaac ttctatgcgg gccagggttcg gcaactttgt cacagtcac 480
 tctgtgttcc tcagtaatat tattgtctct acacacaccc ttctgtctat tcaattgtc 540
 ttctgtgacc acaacactct cccacacttc ttctgtgact tggccctct gctcaaactg 600
 tcctgttcag atacaatgat caatgagctt gtgttgttta ttgtgggttt atcagttatc 660
 atcttccctt ttgtactcat cttctctctc tatgtctgca tcacagagc tgtcctggga 720
 gtatcatcca cacagggaaa gtggaaagcc ttctccactt gtggctctca cctgacaatt 780

gcattactgt	tctacggaac	cactgtaggc	gtgtactttt	tcccctcctc	cactcaccct	840
gaggacactg	ataagattgg	tgctgtccta	ttcactgtgg	tgacacccat	gatgaacccc	900
ttcatctaca	gcttgaggaa	taaggatatg	aaaggtgccc	tgagaaagct	catcaataga	960
aaaatttctt	ccctt					975

<210> 792

<211> 943

<212> DNA

<213> Unknown (H38g642 nucleotide)

<220>

<223> Synthetic construct

<400> 792

atgagacctg	ataacagcat	tacagaattt	gtcctcctgg	gattctctca	ggatcctggg	60
atgcaaaaag	aattatttgg	catgttttta	ttcacatacg	ttgtgactgt	gttgggggaa	120
cagctcattg	tggtgactat	cattgccagc	ccttccttgg	gctccccaat	gtacttcttc	180
cttgccctgc	tgctatttat	agatgctgca	tatttctactg	tcatttctcc	caaattgatt	240
gtggacttac	tctgtgataa	aaagactatt	tccttcctaaa	cgttcatggg	ccaactattt	300
atagaccact	tctttgggtg	tgagaggcc	ttccttctgg	tggtgatggc	ctatgatcgc	360
tatgttgcca	tctgtaagac	attgcactat	ttgaccatca	tgactcgaca	ggtttgatc	420
cttgacattg	tggtggctgc	gacaggcggg	tttgtgcatt	ctgtgtttca	aattgtttgt	480
gtgtacagtc	tccctttctg	tggcgccaat	gtcattgatc	atttcagttg	tgacatgtat	540
ccattattgg	aactggcatg	aactgacacc	tactttatag	gcctcactgt	tgttttcagt	600
gggtggagcac	tctgtatggg	catcttcacc	cttctaataa	tttcctatag	ggtcaccta	660
aactccctta	aaacttacac	tcaggaagg	agcataaagc	cctgtctacc	tgacagctccc	720
acatcactgt	gattgttctc	tttttattcc	ctgtatttcc	atatatgtga	gacctgtttc	780
aaacttttct	attgacacat	tcatgactgt	cttttatata	gttatcacac	ccaagttgaa	840
tcctttaata	tacactttca	gaaattcaga	gatgagaaat	gttatagaaa	aactcctggg	900
gaaaaaggta	actatattta	gaataacagg	gtccatcctc	atg		943

<210> 793

<211> 942

<212> DNA

<213> Unknown (H38g643 nucleotide)

<220>

<223> Synthetic construct

<400> 793

atgagacaga	ataaaaaataa	tacagaattt	gtcctcctgg	gcttctctca	ggatcctgat	60
gtgcaaatgc	attattttgtc	atgtttttact	cacataattg	gtgacaacag	tgggggaacct	120
gttcattgtg	gtgactatta	tgccagccc	ttccttgggc	tccccagtg	atttctgact	180
tgctgtctg	tcattgtatag	atgctgcata	ttccactacc	atttctccca	aactgattgt	240
agagttactc	attgataaaa	agactatttc	cttcagagct	tgcatgggccc	agctatttat	300
agaacacttg	tttgggtggta	ctgagatctt	cattctgatg	atgatggcct	gtgatcgcta	360
tgtggacatc	tgtaagccac	tgactattt	gaccatcatg	aattgacagg	tttgcaccc	420
tctgttgggtg	ttggctgtga	caggagggtt	tgtacattct	atgtttcaaa	ctgttgttgt	480
gtacaatctc	cctttctctg	gccccaatgt	cattgacatt	gaccactttg	tctgtgacat	540
gtaccattta	ttggaactgg	cgttcactga	tacctacttt	ataggcctca	ctgttgttgt	600
caatgggtgga	gcaatgtgta	tggtcatctt	caccattcta	ctaataatcct	acggaatcat	660
cctaaactct	cttaaaaactt	atagtcagga	agggagggtg	aaagccctgt	ctacctgcag	720
ccccacata	accgtgggtg	tcctcttttt	tggtccctgt	attttcata	atgttagacc	780
tgtttcaacc	tttccatttg	ataaattcat	gactgtgttt	tatacagtta	tcacacccat	840
gttgaatcct	ttaatatata	cgttgagaaa	ttcagagatg	agaaactcta	tagaaaatct	900
cttgtgtaaa	aaagctatct	gtagttagaa	taagagtgtc	cc		942

<210> 794

<211> 945

<212> DNA

<213> Unknown (H38g644 nucleotide)

<220>

<223> Synthetic construct

<400> 794

gagtaaata	gacagaataa	cagtagtaca	gaatttggtc	tcctgggctt	ttctcaggat	60
cctgatgtgc	aaaatgcgct	atgtgtcatg	tttttactga	catacattgt	gacaatgggtg	120
gggaacctac	tcatttggtg	gactattatt	gccagccctt	ccttgggctc	cccaatgtac	180
tttttccttg	cccacctgtc	atttatagat	gctgtgtatt	ccaccaccat	ttctcctgta	240
ttgattgtag	acttactctg	tgacaaaaag	acgatttcct	tctgagcttg	catgggacaa	300
ctgtttatag	accacttatt	tgggtggtct	gagggtcttc	ttctgggtgt	gatggcctgt	360
gategctgtg	tggccatctg	taagccactg	cactatttga	ccatcatgaa	tcgacagggt	420
tgcattcttc	tcttggtgtt	ggctgtgact	ggagggtttg	tgcacccctg	atttcaagtt	480
gttggtgtgt	acagtctccc	tttctgtggc	cccaatgtca	ttgaccactt	tttctgtgac	540
atataccctt	tatttggaac	tggcatgcac	tgacacctac	tttataggcc	tcactgtggg	600
tttcaatggt	ggagcaatgc	gtatggtcat	cctcaccctt	ctactagtct	tctatggagt	660
catcctaatac	tcccttaaaa	cttacagtca	ggaagggagg	cataaagccc	tgtctacctg	720
cagctcccat	gttaccgtgg	ttatcttggt	ttttgtcttc	tgtattttca	tatatgttag	780
acctgtttca	aattttctgt	tgataaattc	atgactgtgt	tttatacggt	tatcacaccc	840
atgttgaatc	cttttatatg	catgttgaga	aattcagaga	tgagaaatgc	tatagaaaaa	900
ctcctgtgta	aatgaactg	tagttagaat	aagagtgttc	cttcc		945

<210> 795

<211> 939

<212> DNA

<213> Unknown (H38g645 nucleotide)

<220>

<223> Synthetic construct

<400> 795

atgggactga	gtaacaatgt	tacagaactt	ttcctcctgg	gcctcactca	ggatctcgat	60
gtgcaaaatg	cattatttgt	catgttttta	ctaacataca	ttgtgactat	gggtggggaac	120
ctgctcattg	tggtgactat	tattgccacc	ccatccttgg	gctccccaat	gtactttttc	180
cttgccctgcc	tgtcatttat	agatgctgtg	tattccacca	ccatttatcc	caaattgggt	240
gtagactaac	tccataatta	aaagactatt	ttgttcccaa	cttgcattggg	ccagccactt	300
acagaccact	tatttggtgg	tgttgaggtc	tttttttctg	ttggtgatgg	cctgtgatcg	360
ctatgtggcc	atctgtaagc	cactgcacta	ttttaccatc	atgaatcgac	agggttttcat	420
ccttctgttg	gtagtggctg	tgactggagt	tttggtcggt	ctgtgttcca	aattgttgtt	480
gtgtacagtc	tccctttctg	tggccccaat	gtcattgacc	actttttctg	taacatgtac	540
ccattaatgg	aaatggcatg	aactgacacc	tactttatag	gcctcactgt	ggttttcaag	600
gttgaagcaa	tctgtgtggt	catcttcacc	cttctactaa	tctcctctgg	cgtcactcta	660
atctccctta	aaacttacag	tcaggaaggg	aggcataaag	ccctgtttac	ctgcagctcc	720
cgcattactg	tagttgtcct	cttttttgtt	ccctgtattt	tcatgtatgt	tagacctgtt	780
tttaacttcc	ccattgataa	atttattatt	gtgttttata	cagttatcac	acccatgctg	840
aatcctttaa	tatacatgtt	gagaaattca	tagacgagaa	atgctataga	aaacccttag	900
tgtaaaaaat	taactgtaga	tagaataaga	gtgtacatc			939

<210> 796

<211> 945

<212> DNA

<213> Unknown (H38g646 nucleotide)

<220>

<223> Synthetic construct

<400> 796

atgagaccta	ataacagtat	tacagaattt	gtcctcctgg	gctttttcaca	ggatcctgat	60
atgcaaaaac	cattatttgt	catgttttta	ctcacataca	ttgtgacagt	gggtggggaac	120
ctactcggtg	cggtgactat	tattgtcagc	ccttccttga	gctccccaat	gtaattcttc	180
cttgcttgcc	tgtcattaat	agatgctgta	ttatccacca	ccatttctcc	catattgatt	240

gtagacctac	tctgtgacaa	aaagactatt	tccttccag	cttgcatggg	ccagctat	300
acagaccact	tgtttgggtg	aactgagatc	ttccttctgg	tggatgatgg	ctatgatcgc	360
tacgtggcca	tctgtaagcc	actgcaactat	ttaaccatca	tgaatcgaca	ggtttccatc	420
cttctgttgg	tgggtggccat	gactggaggt	ttccttcatt	ctgtgtttca	aattgctgtt	480
ctgtacagtc	tccttttctg	tggccccaat	gtcattgacc	actttttctg	tgacatgtac	540
ccattattgg	aactggcgtg	cactgacacc	tactctatag	gcctcactgt	agttttcagt	600
ggtggagcaa	tgtgtatggt	catcttcgcc	cttctactaa	tctcctatgg	agtcagccta	660
aactccctta	aaacttatag	tcaggaaggg	agggcgtaaag	ccctgtctac	ctgcagctcg	720
cacatcaccg	tgggtgtcct	cttttttggt	ccctgtattt	tcattgtatgt	tagacctgtc	780
tcaaacttcc	ctattgataa	attcgttact	gtgttttata	cagttatcac	acccatgctg	840
aatccttttt	tatacacgtt	gagaaattca	gagatgataa	atgctataaa	acacctgttg	900
tgtagaagc	taactatagt	tagaataaga	gtgtccctcc	tcattg		945

<210> 797

<211> 967

<212> DNA

<213> Unknown (H38g647 nucleotide)

<220>

<223> Synthetic construct

<400> 797

atgggatcta	gtaacaatgt	tacagaat	gtcctcctgg	ccctcactca	ggctcctgat	60
gtgcaaaaag	tattatttgt	aatgttttta	ttcacatata	ttgtgactat	ggtgggcaac	120
ctgctcactg	tggtgaccat	ttttgccctc	cctctttggg	ctccccagtg	taactcttcc	180
ttgcctgcct	gtcattgatg	gatgccgtat	attccacttc	atcttctcct	aaactgatga	240
tagacttact	ctgcgataaa	aaagactggt	tccttcccg	cttgcatggg	ccagctat	300
gcggaaccac	tatttgggtg	tgttgaggtc	tttcttttcg	tggggatggc	ctatgatcac	360
tatgtggcca	tctctaagcc	actgcaactat	ttgatcatcg	tgaatcgact	ggtttgcac	420
cttctgttgg	tgggtggcgt	gactggagga	ttttgaattc	tatgtttctt	tttttttaaa	480
tttattttatt	tttttatgtg	aattctatgt	ttcaaattgt	cgttgtgtac	agtcctcctt	540
tctgtggctc	caatgtcatt	gaccacattg	tctgtgacat	gtaccatta	ctggaactgg	600
catgcgctga	cacctacttt	atagggtcca	ctgtgattgc	caatgggtgga	gcaatctgta	660
tggatcatctt	ctgccttcta	ctaacctcct	atggagtcac	cctaaacttc	cttaaaactt	720
atagtcaaga	agggagggcat	agaacctctg	ctacctgcag	ctcccacatt	actgtgggtg	780
tcctcttttt	tgttccctgt	attttcatgt	atgtagagac	tgtttcaaac	ttccctattg	840
ataaattcat	tactgagttt	tatacagtta	tcaccccaaa	gttgaatcca	ttaatccaac	900
cactgagaaa	ttgagaaatg	agaattacta	tgaagaaact	ctgggtgtta	acctgaacta	960
tagtttag						967

<210> 798

<211> 930

<212> DNA

<213> Unknown (H38g648 nucleotide)

<220>

<223> Synthetic construct

<400> 798

atgaaaaata	agaacaatgt	gactgaat	atcctcttag	ggctcacaca	gaacctgag	60
gggcaaaaag	ttttatttgt	cacattctta	ctaattctaca	tggtagcgat	aatgggcaac	120
ctgcttatca	tagtgaccat	catggccagc	cagtcctctg	gttcccccat	gtactttttt	180
ctggcttctt	tatcattcat	agataccgtc	tattctactg	catttgctcc	caaaatgatt	240
gttgacttgc	tctctgagaa	aaagaccatt	tcctttcagg	gttgatggc	tcaacttttt	300
atggatcatt	tatttgctgg	tgctgaagtc	attcttctgg	tggtaatggc	ctatgatcga	360
tacatggcca	tctgtaagcc	tcttcatgaa	ttgatcacca	tgaatcgctg	agtctgtgtt	420
cttatgctgt	tggcgccctg	gattggaggc	tttcttcaat	cattgggtca	atttctcttt	480
atttatcagc	tccttttctg	tggacccaat	gtcattgaca	acttctctgt	tgatttgtat	540
cccttattga	aacttgcttg	caccaatacc	tatgtcactg	ggctttctat	gatagctaata	600
ggaggagcga	tttgtgctgt	caccttcttc	actatcctgc	tttctatgg	ggatcatatta	660
cactctctta	agactcagag	tttgggaagg	aaacgaaaag	ctttctacac	ctgtgcaccc	720

cacgtcactg	tgggtcatttt	attctttgtc	ccctgtatct	tcttgatgc	aaggcccaat	780
tctacttttc	ccattgataa	atccatgact	gtagttctaa	cttttataac	tcccatgctg	840
aaccactaa	tctataccct	gaagaatgca	gaaatgaaaa	gtgccatgag	gaaactttgg	900
agtaaaaaag	taagcttagc	tgggaaatgg				930

<210> 799

<211> 825

<212> DNA

<213> Unknown (H38g649 nucleotide)

<220>

<223> Synthetic construct

<400> 799

atgggtggaa	acctcctcat	ttgggtgact	actattggca	gccccctcct	gggctcccta	60
atgtacttct	tccttgccca	cttggtcactt	atggatgccca	tatattccac	tgccatgtca	120
cccaaattga	tgatagactt	actctgtgat	aaaatcgcta	tttccttgct	agcttgcatg	180
ggtcagctct	tcatagaaca	cttacttggt	ggcgagagg	tcttcctttt	gggtggtgatg	240
gcctatgacg	gctatgtggc	tatctctaag	ccgctgcact	atgtgaacat	catgaatcga	300
ctggtttgca	tccttctggt	gggtggtggc	atgattggag	gttttgtgca	ctctgtgggt	360
caaattgtct	ttctgtacag	tctaccaatc	tgtggcccca	atgttattga	ccactctgtc	420
tgtgacatgt	acccattggt	ggaactgttg	tgccctgaca	cctactttat	aggactcact	480
gtggttgcca	atgggtggaat	aatttgtatg	gtcatcttta	cctttctgct	aatctcctgt	540
ggagtcaccc	taaacttcct	taaaacttac	agtcaggaag	agaggcataa	agccctgcct	600
acctgcatct	cccacatcat	tgtggtggcc	ctcgtttttg	ttccctgtat	ttttatgtat	660
gttagaccgg	tttccaactt	tccctttgat	aaattaatga	ctgtgtttta	ttcaattatc	720
acactcatgt	tgaatccttt	aataactctg	ttgagacaat	cagagatgaa	aaatgctatg	780
aaaaatctct	gggtgtgaaa	gttaagtata	gttagaaaaa	gagta		825

<210> 800

<211> 654

<212> DNA

<213> Unknown (H38g650 nucleotide)

<220>

<223> Synthetic construct

<400> 800

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<212> DNA

<213> Unknown (H38g651 nucleotide)

<220>

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